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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY
ESTABLISHED IN 1872

Vol. LXXIV. No. 26 NEW YORK AND CHICAGO, JUNE 29, 1922 { Per Annum, $4.00 / Single Copy, 10 Cents

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PAGE 25!

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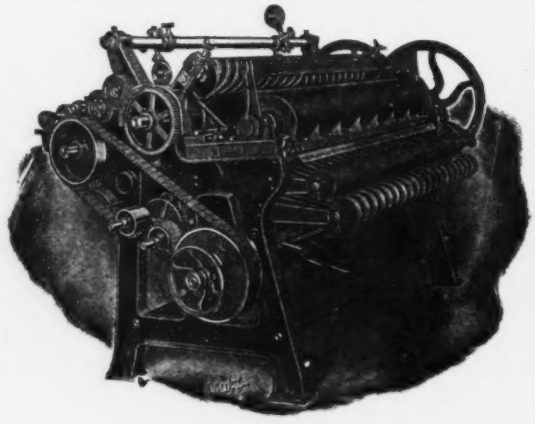
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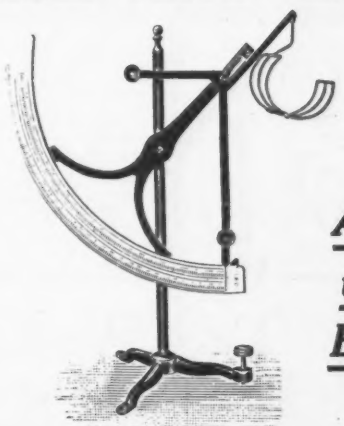

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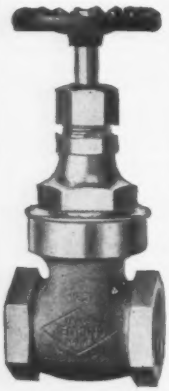

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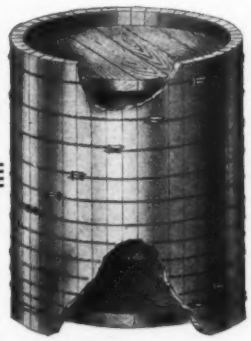

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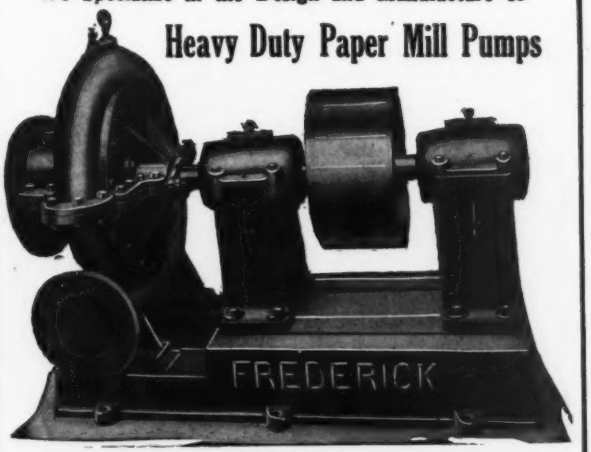

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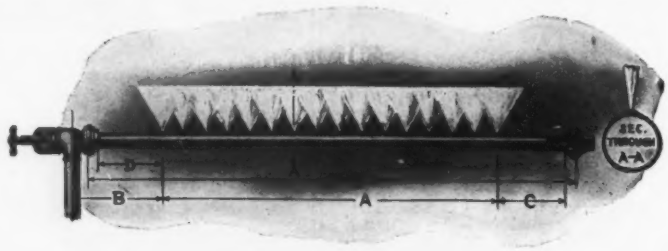

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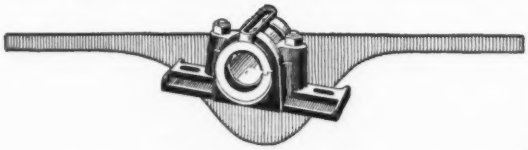

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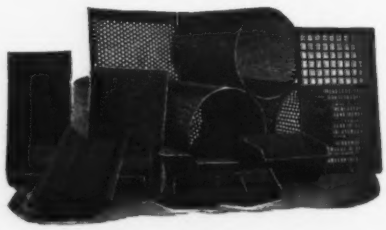

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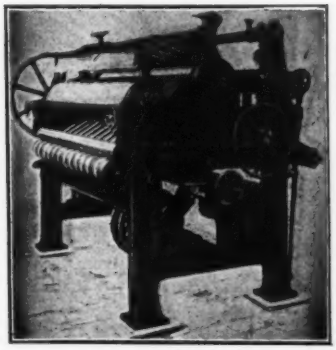

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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTIETH YEAR

PUBLISHED EVERY THURSDAY BY THE

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Vol. LXXIV. No. 26 — NEW YORK AND CHICAGO — Thursday, June 29, 1922

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PRODUCTION OF NEWS PRINT DURING THE MONTH OF MAY

During the Month 129,950 Tons of Total News Print and 120,654 Tons of Standard News Print Were Produced Which for Total News Print Was 14 Per Cent Above the Average for the Five-Year Period and for Standard News 16 Per Cent Above the Average—Publishers' and Jobbers' Stocks and Tonnage in Transit on May 31 Aggregated 191,657 Tons.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 28, 1922.—The following is a tabulation of the reports received by the Federal Trade Commission from domestic manufacturers of news print paper, from jobbers buying and selling news print paper, and from publishers using news print paper. Import and export statistics of the Department of Commerce are also included in the review. Whenever possible the figures for 1922 are compared with those for the corresponding period of 1921, 1920, 1919 and 1918.

The figures which follow show the results of the commission's tabulation for May, 1918 to 1922, inclusive:

	Number of mills	Stocks on hand 1st of month	Production	Shipments	Stocks on hand end of month
Total News Print:		Net tons	Net tons	Net tons	Net tons
May, 1922	82	24,874	129,950	130,043	24,781
May, 1921	87	35,106	78,868	82,776	31,198
May, 1920	92	21,673	129,230	128,080	22,823
May, 1919	70	36,385	105,819	115,120	27,084
May, 1918	66	24,864	111,242	109,984	26,122
Total (5 mos.), 1922	...	23,934	562,912	562,065	24,781
Total (5 mos.), 1921	...	24,763	528,678	522,243	31,198
Total (5 mos.), 1920	...	15,369	629,244	621,790	22,823
Total (5 mos.), 1919	...	19,408	556,245	548,569	27,084
Total (5 mos.), 1918	...	31,713	527,626	533,217	26,122
Standard News (included in Total News Print):					
May, 1922	69	20,101	120,654	121,043	19,715
May, 1921	69	29,580	73,181	75,806	26,955
May, 1920	75	19,085	119,906	118,832	20,159
May, 1919	53	31,236	96,192	105,591	21,837
May, 1918	50	18,891	94,362	94,875	18,378
Total (5 mos.), 1922	...	19,607	525,546	525,441	19,712
Total (5 mos.), 1921	...	19,573	485,813	478,431	26,955
Total (5 mos.), 1920	...	12,338	578,274	570,453	20,159
Total (5 mos.), 1919	...	15,656	508,360	502,179	21,837
Total (5 mos.), 1918	...	26,482	471,890	479,994	18,378

Note—Above figures for total news print do not include hanging paper.

The average production of total news print and standard news, based upon the total combined production for the years 1917 to 1921, inclusive, amounted to 114,440 tons of total news print and 103,688 tons of standard news, for a period corresponding to May. The actual production for May, 1922, amounted to 129,950 tons of total news print and 120,654 tons of standard news, which, for total news print was 14 per cent above the average for the five-year-period and for standard news 16 per cent above the average.

The production of news print for May, 1922, compared with May, 1921, shows an increase, amounting to about 65 per cent for both total news print and standard news.

The production for May, 1922, compared with May, 1920, shows an increase of 1 per cent for both total news print and standard news.

The production for May, 1922, compared with May, 1919, shows an increase of 23 per cent for total news print and 25 per cent for standard news.

The production for May, 1922, compared with May, 1918, shows an increase of 17 per cent for total news print and 28 per cent for standard news.

Mill stocks of both total news print and standard news decreased during May, 1922.

Loss of Production

The following tabulation shows idle machine time reported to the commission for the month of May, 1922. This does not include mills shut down during the entire month:

Reasons	Number of machines	Hours idle
Lack of orders	12	2,416
Repairs	2	118
Other reasons	4	312

Imports and Exports

The imports and exports of printing paper not dutiable (practically all news print) and of wood pulp for the month of April, 1922, compared with the month of April, 1921, were as follows:

	April 1922 Net tons	April 1921 Net tons
Imports of News Print (total)	77,369	64,778
From Canada	67,568	56,883
Germany	2,427	1,329
Norway	667	522
Finland	3,485	1,764
Sweden	3,180	3,621
Other countries	42	659
Exports of News print (total)	3,345	1,278
To Argentina	1,510	84
Japan	385	0
Cuba	537	657
Canada	147	26
Philippine Islands	128	231
China	181	16
Other countries	457	264
Imports of ground wood pulp (total)	11,797	5,687
Imports of chemical wood pulp (total)	65,141	17,625
Unbleached sulphite	28,660	8,570
Bleached sulphite	18,440	2,465
Unbleached sulphate	17,530	6,590
Bleached sulphate	511	0
Exports of domestic wood pulp	2,493	1,963

The imports of news print for April, 1922, were 12,591 tons more than for April, 1921. The exports for April, 1922 were 2,067 tons more than for April, 1921.

The tonnage to "Other countries" under "Exports of News print" for April, 1922, includes 116 tons to Uruguay, 79 tons to Australia and 76 tons to Colombia.

Jobbers' Tonnage

The following tabulation shows the news print tonnage reported by jobbers during the month of May, 1922, compared with May, 1921, 1920, 1919, and 1918, together with commitments to buy and sell.

	On hand first of month Net tons	Received during month Net tons	Shipped during month Net tons	On hand end of month Net tons	Commitments to buy Net tons	Commitments to sell Net tons
Rolls, May, 1922	1,400	10,929	10,862	1,467	19,195	21,774
Rolls, May, 1921	2,536	6,384	6,540	2,380	21,603	25,487
Rolls, May, 1920	1,939	5,669	5,663	1,945	35,598	39,491
Rolls, May, 1919	2,768	3,637	3,567	2,838	47,559	56,498
Rolls, May, 1918	2,865	2,260	1,964	3,161	54,472	54,650
Sheets, May, 1922	4,268	2,511	2,808	3,971	3,749	2,954
Sheets, May, 1921	4,237	2,408	2,827	3,818	2,661	1,939
Sheets, May, 1920	2,757	2,974	3,101	2,630	4,303	3,129
Sheets, May, 1919	6,912	2,157	2,884	6,185	2,628	1,716
Sheets, May, 1918	6,253	3,078	2,779	6,552	7,881	6,886
Total News Print:						
May, 1922	5,668	13,440	13,670	5,438	22,944	24,728
May, 1921	6,773	8,792	9,367	6,198	24,264	27,426
May, 1920	4,696	8,643	8,764	4,575	39,901	42,620
May, 1919	9,680	5,794	6,451	9,023	50,187	58,214
May, 1918	9,118	5,338	4,743	9,713	62,353	61,536

Stocks of rolls in the hands of jobbers at the end of May were 67 tons more than the stocks in the hands of the same jobbers at the beginning of the month. Stocks of sheets were 297 tons less at the end of May than at the beginning of the month. The net decrease in the total stocks of news print in the hands of jobbers at the end of May amounted to 230 tons.

Commitments to sell roll news were 2,579 tons greater than com-

mitments to buy. Commitments to sell sheet news were 795 tons less than commitments to buy. Total commitments to sell both rolls and sheets were 1,784 tons greater than commitments to buy.

Publishers' Tonnage

Monthly tonnage reports from 667 (a) of the most important newspaper publishing concerns and associations grouped according to the principal business sections of the United States, together with a separate tabulation for agricultural publications show the following results for May, 1922.

Location of publishers (b)	Number of concerns	On hand first of month Net tons	Received during month Net tons	Used and sold during month Net tons	On hand end of month Net tons	In transit end of month Net tons
New Englan....	79	14,924	17,464	17,258	15,130	2,008
Eastern States..	175	48,990	62,326	64,598	46,718	10,146
Northern States.	130	37,488	38,706	38,850	37,344	8,181
Southern States.	77	8,905	9,764	9,874	8,795	2,869
Middle West...	149	25,009	27,911	27,811	25,109	5,828
Pacific Coast...	30	10,313	16,015	15,112	11,216	6,569
Farm Papers (c).	27	6,014	1,284	1,167	6,131	175
	667	151,643	173,470	174,670	150,443	35,776

(a) This number represents a much larger number of publications.
(b) *New England* includes Connecticut, New Hampshire, Maine, Massachusetts, Rhode Island and Vermont; the *Eastern States* include Delaware, the District of Columbia, Maryland, New Jersey, New York and Pennsylvania; the *Northern States* include Illinois, Indiana, Michigan and Ohio; the *Southern States* include Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia; the *Middle West* includes Arkansas, Arizona, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wisconsin and Wyoming; the *Pacific Coast* includes California, Oregon and Washington.
(c) The farm papers for the most part use special grades of news print instead of standard news.

Publishers' stocks decreased 1,200 tons during the month. Average daily tonnage used during May was 265 tons less than the average used in April.

Publishers' stocks and transit tonnage on May 31, represented 34 days' supply at the existing rate of consumption.

Publishers' and Jobbers' stocks and tonnage in transit on May 31, aggregated 191,657 tons.

The domestic consumption of standard news by metropolitan dailies using between one-half and three-fourths of a million tons annually, for May, 1922, when compared with May, 1921, shows an increase of 14 per cent and an increase of 20 per cent when compared with May, 1920.

The above metropolitan dailies held 58 per cent of the tonnage on hand at the end of the month.

Average Prices Paid by Publishers

The weighted average price of contract deliveries from domestic mills to publishers during May, 1922, f. o. b. mill, in car load lots, or standard news in rolls was $3.541 per 100 pounds. This weighted average is based upon May deliveries of about 47,000 tons on contracts involving a total tonnage of approximately 534,000 tons of undelivered paper manufactured in the United States.

The weighted average contract prices based on deliveries from Canadian mills of about 24,000 tons of standard roll news in carload lots, f. o. b. mill, in May, 1922, was $3.501 per 100 pounds. This weighted average is based upon the May deliveries on contracts involving about 222,000 tons of undelivered Canadian paper.

The weighted average market price for May, of standard roll news in carload lots f. o. b. mill, based upon domestic purchases totaling about 10,000 tons was $3.548 per 100 pounds.

Investigate Pulp Terminal Facilities of Portland

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Me., June 27, 1922.—A New York company has been investigating the possibility of establishing terminal facilities for shipment to this port of pulp from Norway and Sweden.

U. S. to Ask Bids on Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 27, 1922.—The Joint Committee on Printing which has authorized the opening of bids on July 31 for paper for the use of the Government Printing Office, for the six months' period beginning September 1, is asking for bids on the following paper:

1,040,000 pounds news print paper.
4,848,000 pounds machine-finish printing paper.
500,000 pounds plant-fiber machine-finish printing paper.
15,000 pounds antique printing paper.
15,000 pounds opaque printing paper, high machine finish.
450,000 pounds rag machine-finish printing paper.
1,105,000 pounds sized and supercalendered printing paper.
100,000 pounds halftone printing paper.
165,000 pounds coated book paper.
1,500 pounds USMO white and blue writing paper, machine-dried.
750 pounds white French folio paper.
1,065,000 pounds writing paper, high machine finish.
2,680,000 pounds writing paper, air- or loft-dried.
2,000 pounds fine white writing paper, loft-dried.
1,500 pounds safety writing paper.
250,000 pounds USMO blue safety writing paper.
75,000 pounds map paper.
401,000 pounds bond paper.
550,000 pounds ledger paper.
1,750 pounds tissue paper.
137,000 pounds cover paper.
5,000 sheets cloth-lined cover paper.
635,000 pounds manila paper.
10,000 pounds manila tympan paper.
110,000 pounds manila board.
20,000 pounds cardboard.
475,000 pounds bristol board.
3,500,000 pounds U. S. Postal Card cream bristol board.
4,000 pounds index bristol board.
1,000 pounds white paraffin paper.
2,250 pounds non-curling gummed paper.
1,000 pounds blotting paper.
2,000 pounds stereotype molding paper.
6,000 pounds offset paper for web presses.
1,000 pounds plate-wiping paper for embossing presses.
2,300 pounds lining and stripping paper.
1,000 pounds red pressboard.
500 pounds news board.
220,000 pounds chip board.
45,000 pounds strawboard.
40,000 pounds box board, lined.
380,000 pounds binder's board.

To Ascertain Cost of Production Abroad

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 28, 1922.—Senator Owen, of Oklahoma, has introduced the following amendment to the tariff bill in the Upper House which has been ordered to lie on the table:

"The United States Tariff Commission is hereby authorized and directed to ascertain the difference in the cost of production at home and abroad of every article imported from any foreign country into the United States or into any of its possessions where duty is imposed on such article. The said commission is directed to calculate the specific duty equal to the difference in the cost of production at home and abroad of such article, which, with 10 per cent added thereto, shall be published by said commission as the duty fixed upon such article by the Congress of the United States."

K. V. P. CO., LETS CONTRACT FOR ITS NEW TWO MACHINE PLANT

Buildings Alone Will Cost Approximately $500,000—Plant When Completed Will Be One of the Finest of the Kind in America and Will Have a Daily Output of 120 Tons of High Grade Paper—Charles A. Blaney Is Re-elected President of the Eddy Paper Co.—Mr. Blaney Says That While the Company Lost Money Last Year the Mills Are Now Running Full.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., June 24, 1922.—The immediate erection of an immense two machine mill by the Kalamazoo Vegetable Parchment Company was insured Wednesday afternoon when Jacob Kindleberger, president of the company, awarded the contract for construction to Henry L. Vanderhorst, of this city.

It is one of the biggest jobs' let this year in Western Michigan and competition for the work was very keen. The contract price for the buildings alone was approximately $500,000. In the long list of bids filed, Miller & Boyer, of Kalamazoo, were second to Mr. Vanderhorst and only a little over $500 higher than his successful quotation.

The plant when completed will be one of the finest of its kind in America and have a daily output of 120 tons of high grade papers. The most modern methods of production will be employed.

In addition to the award for the general contract, the power, piping, plumbing, heating and sprinkling contracts have been awarded to the Wheeler-Blaney Co., of Kalamazoo. Orders have been placed so far for over a half million dollars' worth of mechanical equipment and power plant equipment. The erection of the new mill will mean the building of an immense power plant.

All architectural and engineering details are being handled by Billingham & Cobb, Press Building.

Sutherland Paper Co. to Build

The Sutherland Paper Company has awarded to Miller & Boyer, the contract for the erection of an addition to the concern's carton plant. The new building will be 150 by 60 feet in dimensions, one story high. Concrete, brick, steel and glass are the materials to be employed. George E. Higgins will install a complete sprinkling system.

"The building was required to take care of our business," said Fred. Sutherland, secretary of the company. "The additional 9,000 square feet will provide necessary warehouse room and materially relieve the congestion in the other departments of the plant.

"We are very busy and have worked day and night for a long period. We are also getting business that shows a profit. The prices are generally satisfactory and the outlook for the future is flattering. I understand that the conditions that favor us, are also enjoyed by all other carton plants in this section of Michigan."

Eddy Paper Co. Elects Officers

Charles A. Blaney, of Kalamazoo, was re-elected president of the Eddy Paper Company, Three Rivers and White Pigeon, at the annual meeting of the stockholders, held Wednesday at the general offices of the concern. The other officers are: Vice-president, A. L. Pratt, Kalamazoo; secretary, Howard H. Buckhout, Kalamazoo; treasurer, George T. Wolf, Three Rivers; general manager, A. B. Thomas, Three Rivers.

The board of directors, named at the stockholders' session, are: E. S. Rankin, Lewis Kirby, H. L. Vanderhorst, H. H. Buckhout, Arthur L. Pratt, Clare H. Stearns, Charles A. Blaney, Kalamazoo; Oscar Gumbinsky, Harry Gumbinsky, Chicago; George Wolf, Three Rivers and Charles E. Nelson, Otsego. Clare H. Stearns represents the estates of Frank H. Milham and Noah Bryant on the board.

The executive committee is composed of President Blaney and Mr. Nelson and Oscar Gumbinsky.

"The meeting was in every way a successful one," said Mr. Blaney. "While we lost money last year, that is of board mills, generally the slate has been cleaned and we are now on the road to recovery. We are running at 100 per cent now and prices are gradually getting back to stable. The outlook for the future is encouraging."

For sometime there have been rumors that Charles E. Nelson was to be returned to the Eddy Paper Company as general manager. The outcome of the annual meeting demonstrated the falsity of these reports, though Mr. Nelson has been given added responsibilities on the board by being named on the executive committee. His advice will prove valuable on all questions that arise.

Saniwax Paper Co. Increases Capital

The Saniwax Paper Company, of Kalamazoo, has increased its authorized capital from $20,000 to $215,000. Of the latter amount, $15,000 is in preferred stock, 8 per cent cumulative and redeemable on July 15, 1933. The common stock authorized is placed at $200,000, of which $100,000 is fully paid in. None is to be offered for sale.

Herbert G. Harvey, secretary-treasurer of the company, stated this morning: "The additional capital was required to care for the steady expansion of business. It has been duly subscribed and none will be offered the general investing public."

The officers of the concern are: President, George L. Irvine, vice-president, Edgar E. Bartlett, Rockford, Ill., secretary-treasurer, Herbert G. Harvey.

The Saniwax Paper Company owns its plant at North Park street, and the intersection of the Michigan Central Railroad. It enjoys a large trade in bread wrappers, completing all processes of printing, cutting, waxing, etc., in its own plant.

The last annual statement of the concern, filed June 30, 1921, shows a very heavy surplus account, practically five to one for paid up capital. The gross assets at the time of the statement were $162,095.98, with a surplus of $98,049.85.

A. P. & P. A. Distributes Picture Films

The motion picture service of the American Paper and Pulp Association, established as a clearing house for the distribution of existing films owned by various paper companies, was able to place 96 reels of film in eight States during the first six months it has been in operation, and audiences totaling nearly 14,000 have seen the various pictures. This is not a large showing from a motion picture standpoint, but the pictures have gone to clubs, schools, and special groups which were studying the paper industry.

The Information Service of the American Paper and Pulp Association, which is handling this work, could have placed films in twelve State universities for circuit and special call showing through the extension departments of these institutions, had there been sufficient copies of existing pictures to meet the call which is constantly increasing.

The association has been co-operating with the United States Department of Commerce in the campaign of that Governmental department to place industrial films in South America. Several existing films have been submitted to the department's motion picture section, but those in charge believe that to meet the requirements of the South American market it will be advisable to have a special film produced, by co-operation of several interested mills.

WILLIAM EIBEL TO HEAD THE PESHTIGO PAPER CO.

Was Formerly Treasurer and General Manager of the Rhinelander Paper Co.—Strike of the Paper Makers at Nekoosa and Port Edwards Plants of the Nekoosa—Edwards Paper Co., Which Started June 23, 1919, Is Formally Ended by the Union—Intrastate Freight Rates on Wood Pulp and Pulpwood Reduced by the Wisconsin Railroad Commission—M. F. Herb Resigns.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., June 27, 1922.—William Eibel, former treasurer and general manager of the Rhinelander Paper Company was elected treasurer and general manager of the newly organized Peshtigo Paper Company at a meeting of directors in Milwaukee. Mr. Eibel also was elected a director of the company. Other officers are J. G. Sutherland, president; C. A. Goodman, vice-president; E. J. B. Schurbring, secretary.

The property of the former Peshtigo Pulp and Paper Company and the Peshtigo Fiber Company has been formally transferred to the new corporation. Construction work at the plants, authorized when the new company was formed, is already under way. Supervision of the work has been given to the Management, Engineering and Development Company of Dayton, Ohio. Mr. Sutherland and Mr. Eibel left shortly after the directors' meeting for Dayton to make final arrangements for the new work at Peshtigo.

It is said the paper mill will be in operation in a few more days after being idle for several weeks. It also was reported that plans are being made to install another paper machine to use the entire output of the sulphite mill.

Nekoosa-Edwards Strike Formally Off

The strike of papermakers at the Nekoosa and Port Edwards mills of the Nekoosa-Edwards Paper Company, which started June 23, 1919, was formally ended at midnight Thursday, June 23, 1922, according to notices posted by the union secretary. The strike has been practically ended for many months but never was formally called off. Posting of the notices was merely a formality officially acknowledging a condition that has long existed. No reason was given for posting the notices except that it was in the interest of better feeling and harmony among the residents of the two villages. It had absolutely no bearing on the labor situation. All of the men who went on strike either have returned to work months ago or have left the villages. Officials of the paper company would make no comment on the occurrence.

Freight Rates Cut on Wood Pulp

Intrastate freight rates on wood pulp and pulpwood logs in Wisconsin were cut 10 per cent by the Wisconsin Railroad Commission in a decision made public last week. The new rates become effective July 1, and will bring the intrastate rate to conformity with the new interstate rates established by the Interstate Commerce Commission. It is said in Madison that the new rates mean a saving of $100,000 a year to the pulp and paper manufacturers of Wisconsin.

The decision was handed down in the cases of the Wisconsin Traffic Association, which includes most of the big mills of the State, against the railroad companies of the State. The traffic association also furnished information to the commission which tended to show that a cut in rates on paper freight also would be justified at this time. No decision was made on that point, however.

The new schedule carries a sliding scale rate, starting at 2 cents a hundredweight a mile for the first five miles on all pulpwood, pulpwood logs and pulpwood bolts in carloads. The rates per hundred pounds increase with the number of miles. The principal steps are as follows:

30-mile hauls, $.028; 50 miles, .031; 70 miles, .039; 90 miles, .044; 100 miles, .046; 150 miles, .054; 200 miles, .06; 300 miles, .077; 400 miles, .92.

On interline movements of pulpwood participated in by two lines there will be an added charge of 1.1 cents per hundred pounds and for interline hauls participated in by three or more lines the added charge will be 2 cents per hundred pounds.

One of the first rafts of pulpwood gathered along the shore of Green Bay, to reach the port of Green Bay this year, arrived last week. It contained about 5,000 cords.

M. F. Herb Leaves Hoskins-Morainville Co.

Michael F. Herb, general superintendent of the Hoskins-Morainville Paper Company, at Menominee, Mich., has resigned and will leave shortly after July 1, for New Westminster, B. C., Canada, where he is one of the organizers of a new paper company. Mr. Herb was with the Menominee company for about a year. Before that he was general superintendent of the Peshtigo Pulp and Paper Company and one of its directors. He has disposed of his interests in that company.

J. J. Herb, a brother, is president of the new Canadian company and Harry M. Lord, formerly with the Peshtigo company, is secretary and treasurer. Mr. Herb will make the trip from Menominee to the western coast by automobile.

W. J. Peacock Makes Address

The Fox River Valley Industrial Relations Association, which includes practically all of the paper mill owners in the valley was so pleased with an address by W. J. Peacock, head of the department of personnel of the Northern Paper Mills, Green Bay, at the monthly meeting at Menasha, that it was ordered printed and sent to all the members. Mr. Peacock discussed "Mental Factors in Employment Relations."

Mr. Peacock emphasized the need of relating employees to their tasks on the basis of ability and the needs of the job itself. He said mental characteristics are more important than physical, both in hiring men and fitting them comfortably to their tasks. To this end he advocated getting acquainted with prospective employees by means of some simple mental tests, and called attention to the success achieved in the war in selecting men with qualifications for leading others by examinations.

Use of simple educational methods in the plants was urged by Mr. Peacock who called attention to the fact that many employees in industry leave school early in life and consequently secure little training for improving their mental faculties.

Special attention was given to what Mr. Peacock termed "shop opinion" or the state of mind in the plant as a whole. He suggested that the average man likes to know and is entitled to know, much of the serious business in which he is engaged and that employers can prevent a great deal of anxiety and unrest and insipient bolshevism by taking their men more into their confidence.

Award Damages in Dam Case

A decision has been reached in an old case, which has been on the court calendar at Wisconsin Rapids for a number of years, involving damages alleged to have been caused owners of land by water which backed up over their property when the Consolidated Water Power and Paper Company raised its dam at Biron. Three commissioners held that damage caused in the past has been largely offset by drainage but awarded damages for future losses that would incur if the paper company dam was raised a sufficient height to maintain a 21-foot head, as is now contemplated. These damages totalled about $7,000.

Eagle Paper Co. Starts at Salisbury

SALISBURY, N. C., June 28, 1922.—The Eagle Paper Company has been started by G. G. Waller on East Council street, to handle wrapping paper, paper bags and other lines of papers at wholesale.

LOOKING FORWARD TO BETTER BUSINESS IN PHILADELPHIA

Orders Which Have Been Held Up for a Long Time Will, It Is Believed, Materialize Soon—No Price Changes of Importance, Although a General Advance, in Book Papers Is Expected Soon—Freas B. Snyder Retires as Head of the W. C. Hamilton & Sons Mills and Is Succeeded by Samuel L. Hammer—Committee Makes Investigations of Cost of Doing Small Order Business.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., June 27, 1922.—The trade is still confident that the recent gain in the number of inquiries for large lot and direct mill shipments required for the publication of catalogues particularly, which long have been held up, will result in business sooner or later, and that it is only a matter of contented waiting until the results will appear. It would not be at all surprising if they came this year at a time which ordinarily is the dull one, and if they do the delay will, of course, be entirely satisfactory.

There were virtually no price changes of importance at the mid-month when a number of houses issue new editions of their price list. In the list of the Whiting-Patterson Company which bears date of June 15, but which only appeared during the week, there are slight revisions on a number of its own brands but these were not numerous enough or large enough in amounts to be characterized as a cut in prices. Meanwhile the jobbers are expecting a general advance in book papers and more probably in coated papers. The coarse paper market continued to be quiet in demand, the only activity displayed being on the part of salesmen bent on getting the business away from the other fellow and willing to make price, and even profit, sacrifices to do so.

Mill demand for all grades of paper stock save hard white continued in sufficient quantity to keep the market cleaned up, but not in sufficient force to raise prices save for the one grade, white shavings. Under the influence of an increased demand by the mills, with no larger supplies in hand, prevailing prices went to the outside figures, but the dealers are not yet convinced that the week's experience was more than a temporary flurry.

Paper Mills Busier

So far as the mills are concerned, the improved conditions in the paper market are evidenced by increased activity. During the week the Flat Rock Mill of Dill & Collins Company opened for full time operation. It had been closed down since early in the year but in the last three-quarters of a year has not been running steadily. The mills of the Jessup & Moore Company are running full, as are those of Curtis & Brothers, Inc., the latter, however, having enjoyed for the last six months or more continued activity. It is reported also that the rope mill of the Reading Paper Company also resumed full time operation during the week after a long close down.

F. B. Snyder Retires from Hamilton Mills

The outstanding developments of interest during the week was the retirement of Freas B. Snyder as head of the W. C. Hamilton & Sons Mills, at Miquon on the Schuylkill, just above Philadelphia, and his succession by Samuel L. Hammer who is widely known in paper mill circles and for several years past actively has been identified with the manufacturing end. Mr. Snyder has enjoyed a very wide and favorable acquaintanceship in the trade and announcement of his retirement came as a great surprise, the fact not even being known to some of the house selling the Hamilton products until the information was imparted by the representative of the PAPER TRADE JOURNAL. The Hamilton Mills have on many occasions been visited by students in the classes on the Typothetæ of Philadelphia, and for that reason are perhaps better known than any of the mills in the Philadelphia district. Mr. Snyder who came to the mills from the First National Bank of which he was vice-president some years ago and before the Hamilton Company asked the banks for an extension of time took an active part in paper trade affairs. Mr. Hammer succeeds him as president and treasurer. It is announced also that R. D. Hamilton, son of Wilbur F. Hamilton, from whom Mr. Snyder purchased an equity in the mill, retires as secretary, to be succeeded by Charles C. Norris, an attorney. It is understood that there will be no changes in the personnel, Ralf Collins continuing as sales manager and F. J. Milton, as superintendent, and that the mills will continue on the same general lines of production, as in the past.

Allen E. Whiting to Go Abroad

President Allen E. Whiting, of the Whiting-Patterson Company, will leave the city on a two months' business trip abroad, sailing on July 1 on the *Homeric*. While he will make a trip through Europe, his headquarters will principally be London and Lyons. The firm has trade connections with a large London house, maintaining a branch in Australia, and the Whiting-Patterson Company exports to it and in turn imports from it. In Lyons President Whiting will visit the famous paper mills of Keller-Dorien, Silvin, et Cie. for whose specialties in fancy papers the Whiting-Patterson Company is the United States distributor. The firm is developing in its New York branch and Philadelphia headquarters a large business for the wonderfully attractive fancy papers made by this famous French maker. During the week there visited the Philadelphia home office of the Whiting-Patterson Company, J. L. Sternfield, as representative in Buenos Aires, Argentine Republic. Mr. Sternfield has branch offices in Brazil and in Chile. The Whiting-Patterson Company is concentrating effort on South American business, looking upon that field under present day conditions as a most attractive one. Mr. Whiting has just returned from the annual convention of the American Envelope Manufacturers' Association, at French Lick Springs. Because of his prospective European trip, he was able to escape the responsibilities of presidency, a position which he held for many years. The Association elected as president, John Heinrich of Minneapolis, as vice-president, E. Harms of St. Louis, and as secretary-treasurer, C. R. Stevenson of New York.

Cost of Doing Small Order Business

Though the special committee on small order business recently appointed by then president Allen E. Whiting of the Paper Trade Association of Philadelphia, and of which George W. Ward of the D. L. Ward Company is chairman, has had no formal meeting, its members nevertheless have been active in informing themselves on the situation existing not only in this city but elsewhere throughout the United States. This personal has been in communication with N. A. Schoenbucher, head of the Cost Division of the National Paper Trade Association, and has secured data of great value. In an authoritative, but unofficial way it is stated that a survey of the Philadelphia market, which has been better organized for the gathering of facts relating to the cost of doing business than any other city in the United States, shows that a little more than one-half of the business done in flat paper sales is in fractional parts of the mill packing and that almost a half of the special delivery service, maintained at a great expense, is engaged in delivering small lots at an actual loss to the distributors. It is suggested that an educational campaign would do much to bring about an improvement in the bothersome and costly fractional lot trade. To illustrate: a customer calls upon his printer for an edition of say 5,000 small pamphlets. To give this number the printer estimates that it will take say 411/20 reams. Had the edition been 5,200 or 4,750, it would have been possible to secure an even number of reams to run it off. But because of the lack of education the 5,000

order, which the customer perhaps would have been willing to have made a 5,200 of 4,750 had he been acquainted with the conditions, stands and the paper house in turn is required to make a fractional part sale. That means that the original cover must be broken, that time must be consumed in counting out the quires and sheets, involving also an almost certain spoilage in the transaction and perhaps an over-count to insure full measure, all of it spelling loss. This is merely one concrete illustration of the problems solved. Another is that because the consumer has been educated to specify certain brands, the printer no longer carries a supply in advance, in stock, and thereby makes the paper distributor whose real function is really that of a wholesaler, actually a retailer. Because of the splendid condition of co-operation and of mutual understanding of each other's point of view which now exists in the printing and the fine paper industries and which has followed, as told in THE PAPER TRADE JOURNAL,, the agreement entered into on behalf of the Typothetæ and of the Paper Trade Association at the history making meeting in the Kugler Cafe, it is felt that the time for doing constructive educational work along the line which the small order committee was authorized to function, is more propitious than it has been in decades, perhaps ever since the present abuse developed. It is recognized that the present day evils are not due to either of the trades or to any factors in them, but solely to a system of evolution and that therefore both sales and purchasing conditions which were proper in the old days, should be revised to meet the changed conditions of the new days.

General News of the Trade

True to promise, the Philadelphia Paper Trades' Golf Association which on Tuesday of this week conducts a revival of the annual tournament of the paper, printing, and publishing trades of Philadelphia on the grounds of the Philmont Country Club, Philmont, Pa., has provided a massive and costly silver cup on a mahogany base to be awarded for the low net score. The trophy cost close to $100, and is now in the safe of President Arthur B. Sherrill. The winner's name is to be engraved upon it and it is to become the permanent possession of him who wins it thrice.

The Paper House of Pennsylvania is rapidly developing the business in the south projected by President, Norbert A. Considine on his recent trip, and while a large stock was sent to the warehouse in Savannah, Ga., it is almost depleted. The firm proposes to enlarge and expand in this territory principally on import lines. During the last fortnight it has been receiving large foreign shipments, and has now on storage in this city over 50 tons of imported news print.

Nearly all the Philadelphia fine paper distributors were represented at the outing of the printers of Reading, Pa., held at the Mountain Spring Home. New York was present also. The Reading contingent played its guests a game of baseball, but just who was victorious was not definitely determined. Isaac Zinn, Gilbert Spare, and Howard Satterthwaite represented the Garrett-Buchanan Company; C. L. Raymond, the Raymond & McNutt Company; E. J. Irvin, Riegel & Co.; Willis Benner and D. W. Hess, the Thomas W. Price Company; A. J. Kern, A. Hartung & Co.; Walter J. Hackett, the Paper House of Pennsylvania; O. S. Steinman, the Whiting-Patterson Company; and Herbert C. Roeder, the Johnson Paper Company of Allentown. An afternoon of sports concluding with a banquet, was enjoyed. The function was in charge of Fred A. Woerner, Boss; Julius Wagner, Balet; H. V. R. High, Grafter; and Joseph N. Eshelman, scribe.

The Whiting-Patterson Company made announcement during the week of slight revision in prices, averaging about 5 per cent on a number of its lines of bonds, and ledgers. The company is now carrying in stock the active and equipment bonds, the Yeoman Ledger and the Collins Linen Ledger, made by the Collins Manufacturing Company.

Dedicatory exercises were held recently at the Garrett-Williamson Lodge Newtown Square, the benefaction of Mrs. Elizabeth Williamson Garrett, widow of the late Casper S. Garrett, founder of the C. S. Garrett & Sons Corporation, and brother of Sylvester Garrett, founder of the Garrett-Buchanan Company. Mr. Garrett died in 1910, leaving a large farm in Newtown Square to his widow and she devised this together with an endowment fund, to the lodge into which there are to be admitted 100 women and children.

Clarence Holland, office manager for Sylvester S. Garrett, is back at his desk after a vacation in the south, principally in Hot Springs, Va.

There was filed during the week an inventory of the estate of the late John O'Neill, member of the waste firm of O'Neill Bros., Inc. appraising its value at $728,346 and his interest in the O'Neill firm at $189,652.

The John M. Driver Company, 55th and Hunter streets, paper specialty converters, has been sued to recover $2,960 for merchandize by the Lockport Machine Company, Lockport, N. Y.

Clyde A. Cobaugh, formerly of the Paper House of Pennsylvania, who recently established himself at 825 Walnut street, in the blotting paper business exclusively is sending out effectively printed samples of the line of Standard blottings which he carries in eight varieties.

Though the trade for many weeks has been awaiting with interest the announcement of the appointment of a dual agency for the S. D. Warren line, no definite information has been made available although it is understood from rather direct sources that a formal announcement shortly is to be made.

E. H. Mayo, of Southern Paper Co., to Visit Europe

MOSS POINT, Miss., June 27, 1922.—Edward H. Mayo, general manager of the Southern Paper Company, sails from New York on July 13 to spend eight or ten weeks on a tour through England, France, Scotland, Sweden, Norway and Finland. While this trip is primarily a business one in the interest of the Southern Paper Company, Mr. Mayo will be accompanied by Mrs. Mayo and their son, Lawrence.

Mr. Mayo has been general manager of the Southern Paper Company since 1913, at which time that company began its career in the successful manufacture of Kraft pulp and paper from Southern pitch pine.

E. H. Mayo, it is said, has the distinction of being the first to make sulphate pulp and Kraft paper from the yellow pine of the South, and also of making paper during the years 1914, 15, and 16 at a lower cost than any mill in this counry. His career as a paper maker was begun something over thirty years ago with the Orono Pulp and Paper Company of Orono, Me., his birthplace and boyhood home. While in the employ of that company he had his first experience as machine tender. Later he accepted a similar position with the Eastern Manufacturing Company of South Brewer, Me., and started their first machine, later being promoted to boss machine tender. His next position was with the W. D. Boyce Pulp and Paper Mills of Marseilles, Ill., in the capacity of general superintendent, and later he held a similar position with the Munising Paper Company of Munising, Mich. After holding the latter position for three years, he accepted an offer to become general manager of the Yellow Pine Paper Mill Company of Orange, Tex., which mill was the first in this country to make pulp and paper from yellow pine. When he assumed charge of this mill, they were making pulp by what is known as the soda process, but in a short time he changed their process from the soda system to the sulphate or Kraft system. From this pulp they were able to get a very satisfactory paper for wrapping, bag and envelope purposes.

In the year, 1913, when the Southern Paper Company was ready to start its pulp and paper mill, Mr. Mayo was engaged as general superintendent. He held this position but a very short time, when his managerial ability was recognized by the directors, and he was made general manager.

PAPER DEMAND IN CANADA IS STEADILY INCREASING

Optimistic Feeling Has Been Greatly Accentuated by the Decrease in Freight Rates and the Announcement That the Consumption of News Print in the U. S. for the First Four Months of 1922 Was 7 Per Cent Greater Than for the Corresponding Months of 1920, Which Was the "Peak" Year Up Until That Time—Saguenay Paper Co. to Issue $6,000,000 Bonds.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., June 26, 1922.—The optimistic feeling in the pulp and paper trade still continues, owing to the steadily increasing demand for all kinds of paper. Following upon the announcement that most of the news print mills are either running at capacity or near to it, comes a report from Three Rivers that the Wayagamack mills are now running at capacity, and have enough orders to keep going at full speed for some months. The Wayagamack mills were hard hit by the recent depression. These mills manufacture kraft and other wrapping papers, the falling off in the demand for which was more severe than in the case of news print. The outlook now for this branch is brighter than at any time since early in 1920. In news print circles the optimistic feeling has been greatly accentuated by a decrease in the freight rates, just announced, and by the publication of returns showing that the consumption of news print in the United States for the first four months of 1922 was 7 per cent. greater than for the corresponding period of 1920, which was the "peak" year up until that time. An analysis of the Federal Trade Commission's figures published here draws attention to the small variation in the production of news print in the United States as compared with the steady increase in production in Canada. Production in the U. S. mills in 1921 was less than in the previous year listed, and even in 1920, the highest figure, was only 16 per cent greater than in 1913. In the same period Canadian production increased from 350,000 tons to over 500,000 tons; in 1920 it was 883,000 tons, or slightly over two and a half times the 1913 production. To offset this lack in growth of production, the imports of news print into the United States have shown a steady increase in this period. In 1921 they were 265 per cent greater than in 1913, an average increase of 33 per cent annually. Further analysis shows that while the actual consumption in 1921 was only 4.2 per cent less than in 1920, the amount "available for consumption" was 8.9 per cent less than in the previous year, owing to the smaller quantities of news print held in stock by the publishers.

Boston Firm Financing Canadian Limits

The Royal Securities Corporation of Montreal is associated with Halsey, Stuart & Co., of New York and Chicago, and Edward B. Smith & Co., of New York and Philadelphia, in an offering of $2,500,000 7 per cent first mortgage 20-year gold bonds of Stetson, Cutler & Co., which are to be marketed at 98 and accrued interest, to yield about 7.20 per cent. The company is one of the largest manufacturers and dealers in spruce lumber and cedar shingles in Eastern Canada, and has been in successful operation for over 60 years. The purpose of the issue is to fund in part indebtedness of the company and its subsidiaries, to provide working capital, etc. The bond issue is a portion of an authorized issue of $6,000,000, in addition to which their capitalization includes 250,000 common shares of no par value. Most of the stock is owned by the Cutler family of Boston. Timber limits are held covering 54,000 acres of freehold, and 1,784 square miles of leasehold timber lands in the province of New Brunswick, while in the province of Quebec the company holds 335 square miles of leasehold timber lands. The average sales of the company for the past five years have exceeded $5,000,000. The net earnings of the company and its subsidiaries amount to an average of over half a million dollars for the years 1915 to 1920, inclusive. During the year 1921, in common with other companies, the heavy inventory losses wiped out the profits, and operations showed a loss of $604,410.

New Borrowing for Saguenay Pulp

At the annual meeting of the Saguenay Pulp and Paper Company, to be held here this week, some new by-laws are to be considered and if acceptable adopted. The principal one provides for the issue of $6,400,000 gold collateral trust bonds or the borrowing of an amount not exceeding the above. It is also proposed to amend the by-laws for the calling of annual and special meetings of shareholders, provide for the remuneration of the executive and board of directors, together with the appointment of a committee of management consisting of three persons who shall have full control of the working arrangements of the company and of all its subsidiaries upon such terms and conditions and in such manner as may be determined by the by-law.

H. Croix Paper Co. Sold

From Halifax, N. S., it is reported that the Premier Paper and Power Company has acquired the H. Croix Paper and Lumber Company, including the latter's watershed and 26,000 acres of pulpwood, and is planning the early construction of a new paper mill and power plant to cost approximately $1,500,000. The mill will be 35 miles from Halifax, and will consist of two hydraulic turbines generating approximately 3,300 h.p., four water wheels to drive grinders, and one news print machine.

Heavy Floods Cause Damage

Day after day of excessive downpour of rain has caused heavy floods in Quebec and the Maritime Provinces, and while this has ensured ample water supply for the season, much damage has been done to the property of pulp and paper and lumber companies. The most serious yet reported is in New Brunswick, where the big dam on the Tetagouche river, holding about 6,000,000 feet of lumber, owned by the F. E. Sayer Company, gave way. The logs carried away the steel and concrete bridge across the river. Half the lumber went down the St. John River, but the other remaining 3,000,000 feet and the highway bridge were dashed against the C. P. R. bridge, carrying it four feet out of alignment. The chief cause of the loss of the Sayer logs was the washout of the sawmill at Estralon, owned by Henry A. Smith. The Smith sawmill and all the bridges on the Coldstream, a tributary of the Tetagouche, were caught in the flood and washed away into the larger stream, carrying the logs stored there.

May Build Wood Pulp Mill at Aberdeen

ABERDEEN, Wash., June 22, 1922.—Thorough study of the advantages offered by the Grays Harbor territory for operation of a wood pulp mill is being made by a party of engineers, composed of Henning Helin, of Vancouver, B. C.; Henry M. Pope, of Boston, Mass., and Arthur Surveyor, of Montreal, Canada. The party arrived in Aberdeen recently, and the purpose of their visit is to make report to Canadian and eastern interests before whom the project had been put by Mr. Helin, following a couple of visits made here in the past few months.

Agreement had already been reached with the municipal authorities covering supplies of water to be furnished a projected wood pulp plant from the city water system. The work of the engineering party now involves a checking up of supplies of raw material, waste from the Harbor mills, and of additional water supplies.

"It is too early," said Mr. Helin, "to say what the report of the party will be, but there is good reason to hope that, nothing unforeseen now in the way of difficulties coming up, it may result in a decision favorable to the installation of a plant in Aberdeen. The exact location of such plant it would be impossible to forecast now."

TRADE NEWS IN MIAMI VALLEY OF INTEREST TO PAPER MEN

Paper Manufacturers Show Much Interest in Straw Crop Which It Is Generally Believed Will Be a Good Average One Although Some Authorities Express Concern Regarding Possibilities of Damage from Black Rust—J. F. Bennett Says the Situation Is Not Appreciated and That the Crop Will Not Be Satisfactory—American Envelope Co. Shows Its Plant to the Civitan Club.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, O., June 26, 1922.—Straw manufacturers in particular are interested in the harvest of wheat in the Middle States. Ohio, Indiana, Illinois, Michigan, and one or two other commonwealths produce sufficient straw to keep many paper plants in operation, not only in the territory mentioned, but in many sections of the United States.

Usually the crops produced in these States affords a reliable barometer in the matter of production in other States. They compete with Kansas and the Dakotas.

In Ohio the harvesting already is well under way. It is exceptionally early. The stand of wheat in most sections is reported as extraordinarily good. The State Department of Agriculture reports one fifty acre field in Butler county, on the farm of former Governor J. M. Cox as testing out the best of any in the State.

The Miami Valley is famed for its wheat fields. At this season of the year mile after mile of golden grain is waving in the breeze presenting one of the most placid yet inspiring sights to be witnessed anywhere in the country. The culture of wheat has proved to be the backbone of the agricultural element and it is of inestimable value to the straw paper manufacturers and others.

Montgomery and Preble counties report fine yields with a heavy stand of straw. In some other counties the Hessian fly has been playing havoc and there is a diversity of opinion with reference to the damage sustained. Typical of these counties is Clinton, located in the southwestern section of Ohio.

Reports of the crop being damaged by black rust have been received. According to these reports the damage due to the so-called plague extend all the way from slight injury to total ruination of the crop.

Some farmers who have examined closely the grain in a number of fields predict that threshing time will show the grain shriveled and of little or no worth; other farmers, who have made similar investigations in other fields, declare that very little evidence of the existence of the plague has been found, and express the belief that no damage should be expected to the crop.

Farmers agree that the disease has a peculiar behavior.

"It does its work quickly," explained J. F. Bennett of the firm of Bennett & Thompson yesterday. "I've seen a field looking in perfect condition, and inside of three days dry up and the grain shrivel until it was not worth threshing. Wheat that is found to be affected with black rust should be cut green, the sap in the stalks being sufficient usually to ripen the heads and develop the grains without the blighting effects of the rust being felt."

Mr. Bennett, who has been studying fields on his own farm and others in the region of Clinton Station, said that he found black rust present in a more pronounced form than he had known it to exist for many years.

"I feel that the farmers of the county do not really appreciate the situation," said Mr. Bennett, "and I am afraid that the crop will not be satisfactory when it comes harvest time."

A. J. Wilson, First National bank president and close student of crops by reason of his active work on his own farms, does not share the fears of Mr. Bennett regarding the danger to the crop.

"I've seen some signs of black rust and I know that it has a bad effect on the crop, but really I do not feel that the danger is as great as some men think it is. I do not find much evidence of the plague in my own fields, and I've been very much encouraged by the report to me today that Park Buckley makes. Mr. Buckley says that he examined seven fields and found only slight traces of black rust.

"I believe that the wheat crop this year will be a good 10-year-average crop," continued Mr. Wilson. "However, I do not think it will be anything of a 'bumper' crop and may not measure up to the expectations of some folks, who hoped the tall straw and the early promise of a big crop would materialize."

Estate of John D. Steele, Jr.

The total value of the estate of John D. Steele, Jr., who was accidentally shot at his home in Xenia several months ago, is valued at $134,318.37, according to the inventory filed in the Probate Court in Miami county.

Mr. Steele was an officer of the Hoover & Allison Company, cordage manufacturers. Included in the estate were securities valued at $105,479.23, $20,000 preferred stock in the cordage company and $60,000 in common stock.

Mr. Steele was assistant general manager of the plant and met death on the eve of a hunting trip.

American Envelope Co. Entertains

Members of the Civitan Club were entertained recently by the American Envelope Company at West Carrollton. One of the pleasant features of the entertainment was a trip of inspection through the factory.

G. W. Hitz, of the American Envelope Company, and Carlton F. Smith of the Miami Paper Company, were in charge of the meeting. Following the luncheon, the meeting was turned over to E. S. Fussey, John Ahlers and E. D. Smith and services in memory of John H. Patterson, late president of the National Cash Register Company, were conducted.

Paper Manufacturers Ill

Alexander Thomson, vice-president of the Champion Coated Paper Company, Hamilton, was operated on last week at Christ Hospital, Cincinnati. The operation was successful and it is expected Mr. Thomson will enjoy his usual health in a short time.

Another Hamilton paper manufacturer who has been ill is Thomas Beckett, president of the Beckett Paper Company, and head of the Chamber of Commerce.

He was able to leave Mercy Hospital, Hamilton, some time ago and is improving rapidly at his home on Dayton street. It is expected in a short time that he will be able to attend to his duties at the office.

Mr. Beckett was expected here recently when Herbert Hoover addressed the local Chamber of Commerce, but he was unable to attend the banquet. A number of Miami Valley manufacturers were present.

Buys Bonds of Quebec-Saguenay Pulp Co.

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., June 26, 1922.—Bonds of the Quebec-Saguenay Pulp Company of a face value of $237,300 were purchased at public auction Wednesday by the Carthage Sulphite Pulp and Paper Company for $100. This was the only bid made. No expression of judgment as to the real value of the bonds was given.

The Carthage company had loaned the Canadian company the sum of $150,000 and on September 15, 1920, an agreement was eexcuted under which it was agreed that in event default of interest the Carthage company might sell the bonds given as security upon 30 days' public notice. This notice had been given and the sale was duly held.

FREIGHT RATE REDUCTION HELPS CHICAGO BUSINESS

Some Houses Report Quite a Few Orders for Delivery After July 1, When the New Rates Become Effective—Board Situation Is Reported Firm With a Tendency Toward Higher Prices—Bradner Smith & Co. Plan Large Addition at Des Plaines and Van Buren Streets, Which It Is Said Will Give Them the Largest Paper Warehouse in the World—Drop Matter of Retail Price List.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, June 26, 1922.—Buying for delivery after July 1 is among the features of the paper market here. It has been noted by some of the paper merchants that under conditions such as are presented in the announced reduction in freight rates to become effective July 1, the consumers are willing to buy. While some of the paper houses stated this week that they did not feel that the announced freight decrease had stimulated business to a very great extent, others said that they were doing quite a little business which called for delivery immediately following the putting into effect of the reduced rates.

Almost all grades and lines of paper sold fairly well here during the past week. It is still said that March has been the best month for the trade this year and there is little hope extended that the summer months will produce any business to compete with that month in volume. "Business during the summer months is bound to be a little slow" was the opinion given by one paper merchant, "and I do not think that there will be any flurry of buying until the early fall months have set in.

"Of course, some of the mill representatives are getting orders for consignment after July 1, to take advantage of the freight rate reductions, and this has to some extent brought in some future business which under ordinary conditions might have been held until later."

Concerning the coal situation, one mill representative here said that he had advice from the mills to the extent that they were able to get all the coal they required if they would pay the price. The same situation is said to be found among all the mills and this predicament is not worrying the mill representatives here very much.

What will be the attitude of the trade toward a railroad strike is difficult to determine just now. Two or three representatives who have been asked about this, have said that if the strike is called it will place the paper buyers in the same position as it places them—neither will be able to ship.

In the board field the situation is said to have been firm during the past two weeks. There is a tendency toward stronger prices but not many firms have been reported to have moved prices. The market just now is said to be in the midst of a "temporary" good buying period which is not expected to last very long, as most of the board consumers have not sufficient business booked to keep them busy at a very high speed all summer. Board, however, has developed a much stronger position lately and there are some of the board men here who feel that perhaps this new level can be maintained.

Bradner Smith & Co. to Build Addition

Bradner Smith & Co., one of Chicago's oldest mercantile concerns and said to be the oldest Chicago paper house, is now planning a new addition to the big warehouse at Des Plaines and Van Buren streets, Chicago, which will give them the largest paper warehouse in the world.

With the completion of the additional structure the company will have a total available floor space of approximately 300,000 square feet. The two warehouses now are six stories. One story will be added to these to make them conform with the new building to be erected. The new building will be built on the corner on a ground space fronting 150 feet on Van Buren street and 105 feet on Des Plaines street. This additional footage will give the company a total frontage on Des Plaines street of 205 feet.

The company is now located at 175 West Monroe street. It was founded by J. Bradner Smith and George C. Smith in 1852 and then located in South Water street. Immediately after the great Chicago fire the company removed to Wabash avenue near Lake street. Later they moved into Madison street, and still later to Monroe, to the present site of the First National Bank Building. In 1902 this bank took over the property and the paper house moved to its present location. The move to the new address, Des Plaines and Van Buren streets will be the sixth move of this firm in the past 70 years.

Work is to commence on the new building immediately, it is announced and will be ready for occupancy next spring. The company will have offices on the top floor.

Typothetæ Reports on Retail Price List

At the annual meeting of the Chicago Typothetæ, held June 22, the Trade Relations Committee of this organization of Chicago printers made an annual report covering work which had been done by this committee on the local paper question concerning the adoption of the "retail price list" here.

The report stated that "one meeting of this committee with a committee from the Western Paper Trades' Association resulted in showing this committee the friendly feeling now existing between the paper merchants and the printers and the willingness of the paper merchants to further increase the protection now given the printer, and to co-operate with the printers in many ways."

The report showed that the paper merchants have asked that more frequent meetings of this nature be held "so they could get a closer point of contact" and come to a better understanding of each other's needs and requirements.

It was later attempted to force the "retail list" upon the paper men, and the local printer body went on record with two reports on the matter of accepting the "retail list." These reports were both in the majority and minority, with the "retail list" being recommended.

Following the filing of these reports the paper question has been dropped, and unless the present arrangement which "is the only thing that will work in Chicago, New York and certain other cities" is found to be inadequate by a majority of the members of the printing organization, there is doubt that the retail list will be brought up again.

Paper Men in Washington About Paper Schedule

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 28, 1922.—The Senate Finance Committee is going over every item of the tariff bill and reductions are being made in many items throughout the bill.

It is understood leaders of the Senate have been given to understand that unless substantial reductions are made they will not vote in favor of the passage of the bill.

While no very definite information is obtainable, it is understood that the Finance Committee has at least tentatively decided on a number of the rate reductions in the paper schedule. W. J. Raybold, president of the American Paper and Pulp Association, E. H. Naylor, secretary of the Writing Paper Association, Henry E. Stokes of the York Haven Paper Company and Arthur B. Coffin, of C. H. Dexter and Sons, were in Washington on Monday in an effort to keep the paper schedule intact as it was originally reported out from the Finance Committee.

A New Sulphite for Book Mills!

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PAPER DEMAND IN TORONTO GROWS MORE SATISFACTORY

Volume of Business Slowly Increasing With Prices Firm—Fort William Paper Co. Begins Clearing Land for Its 100-Ton News Print Plant, Which It Is Expected Will Be Ready for Operation by August, 1923—Plants of Spanish River Pulp & Paper Mills, Ltd., Reach Record Production of 650 Tons of News Print Daily—Transcontinental Co. Get Extension of Time to Build Mill.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, June 26, 1922.—Business in paper continues to fluctuate a good deal and has many ups and downs but the ups are becoming more noticeable and the volume of trade is slowly increasing. Prices rule firm and there have been no revisions for some weeks now. Most of the wholesalers will take their semi-annual inventories during the present week. Some have done it for years but others are starting in owing to the changes in prices which prevail on stock that was bought six months ago and the values that hold today. As a general thing, stocks are light but June business has shown much improvement over that which was in evidence a year ago and some jobbers report that it is ahead of May trade. July and August are usually quiet months but distributors are looking for an active fall trade. Book and writing paper business is improving and one large mill is reported to have orders sufficient to keep all the machines operating to capacity until the end of August. A healthy indication of the confidence in the future of the trade is evidenced in the fact that a number of mills are making extensions to equipment.

Clearing Site for New Paper Mill

The Fort William Paper Company, of Fort William, Ont., has commenced clearing the land for its new one hundred ton, news print mill, which, it is expected, will be ready for operation by August, 1923. The offices of the present pulp mill are situated upon the proposed paper mill site and are being moved to a new location. Material for the paper mill has commenced to arrive including lumber and mill timbers.

Paper Jobber Kiwanians Busy

The past week has been very busy with a number of wholesale paper men, who have been helping to entertain the five thousand visitors from the Kiwanian Clubs of America on the occasion of their annual convention, which was held in Toronto. A. Whyte of the A. Whyte Paper Company, Fred W. Halls of the Fred W. Halls Paper Company, Ed Scarlett of Wilson, Munroe Company and R. I. Finlay of the United Paper Mills have all been particularly active, the first three being members of the convention reception committee and the latter of the committee on registrations.

Mill Turning Out Many New Lines

The Specialty Paper Mills of Camden East, Ont., which have recently been overhauled are now turning out book, writing and envelope papers as well as paper for waxing purposes. These are new lines with the company and the output is about twelve tons daily. George O. Comfort is president of the organization. Paper Sales, Limited, Toronto, has been appointed selling agent for the mills for the province of Ontario.

All Spanish River Plants Are Busy

The various plants of the Spanish River Pulp and Paper Mills, Limited, at Espanola, Sturgeon Falls and Sault Ste. Marie are busy and have reached a record production of 650 tons daily of news print. The mill at Sturgeon Falls established a new high record. The demand for news print is good at the present time and the outlook promising.

Companies Granted Extension of Time

The Department of Lands and Forests for Ontario reports that an extension of time has been granted to the successful bidders of the Nagagami and Long Lake pulpwood concessions which were disposed of by tender a little over a year ago, to comply with the conditions laid down in the contract. The Transcontinental Development Company, 85 Bay street, Toronto, was awarded the Nagagami limit and was to have begun construction of a pulp mill and carry out certain other obligations by October, 1921. Owing to conditions as they are at present in the pulp and paper industry, the company has been granted an extension of one year so far as construction work is concerned. J. H. Black, 36 Toronto street, Toronto, who secured the Long Lake concession, was to have purchased a pulp mill at some point in the district of Thunder Bay, satisfactory to the Minister of Lands and Forests, and expend a certain sum in its equipment. Due to negotiations with the Ontario Hydro-Power Commission for the supply of power, Mr. Black has also been given an extension of time to comply with the terms of his agreement.

Operations on James Bay Extension

The work of laying rails on the extension of the Temiskaming and Northern Ontario railway, which is owned by the provincial Government, from Cochrane toward James Bay, will be started next week. The grading is well under way. The new line points the direction to the development of another big strip of virgin territory which is rich in pulpwood and, it is expected, that a number of new pulp and paper mills will spring up along the route. There are many inquiries already regarding location, supplies, etc.

Plant Now Operating at Georgetown

The Arabol Mfg. Company, Limited, of Canada is now operating a plant for the manufacture of glues, pastes, etc., at Georgetown, Ont., under the management of G. W. Unsworth. Paper Sales, Limited, of Toronto, has been appointed selling representative of the company in the Dominion and will open an office in Montreal in the near future. J. Hewitt, Jr., of Toronto is general manager and secretary-treasurer of the company and A. G. Allen has been made a director. The company reports that business is opening up promisingly.

Attending Paper Box Convention

A large number of paper box manufacturers of Toronto and various parts of Ontario are in Montreal this week attending the seventh annual convention of the Canadian Paper Box Manufacturers Association which is being held at the Windsor Hotel. The slogan of the gathering is "Business at a Profit." S. J. Frame, of Toronto, is secretary-treasurer of the convention and James Logie of the Canadian Paperboard Company, Toronto, is sergeant-at-arms. The president of the association is C. N. Moisan of the Standard Paper Box Company, Montreal, and the vice-president C. Winter Brown, of the D. F. Brown Paper Box and Paper Company, St. John, N. B.

Notes and Jottings of the Trade

William Gorman of Montreal, eastern representative of the Provincial Paper Mills Company, Toronto, is leaving this week on an extended trip to Scotland for the benefit of his health.

D. F. Robertson, general manager of the Canadian Paperboard Company, has returned from a successful business trip to the western provinces going as far as Vancouver.

Ernest Whittington of the staff of the Canada Paper Company, Toronto, who has been seriously ill with pneumonia, is reported to be improving.

Locking the Door

After the horse is stolen is like
repairing your machines
after the orders
come in

LOCK IT NOW!

BELOIT IRON WORKS
BELOIT, WISCONSIN

BIDS AND SPECIFICATIONS FOR GOVERNMENT PAPER

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 28, 1922.—The purchasing officer of the Government Printing Office will open bids for the following paper on June 29:

3,700 lbs. (50 reams) 24 x 38, Rope Manila Paper;

40,000 lbs. (14,450 sheets) 25 x 30—No. 18, Binders' Board, No. 2 quality.

The purchasing officer of the Government Printing Office has received the following paper bids:

5,850 lbs. 40 x 42—117 Rope Manila Paper: Dobler & Mudge, at $.1099 per pound, and Reese & Reese, at $.0912.

21,600 lbs. Various Colors Cover Paper, 20 x 25—48: Old Dominion Paper Company at $.08649, $.09649; Knowlton Brothers, at $.0847, $.0972, $.1092 and $.0897; Reese & Reese, at $.0859 and $.0959; Mathers-Lamm Paper Company, at $.0854 and $.0953; Dobler & Mudge, $.08465 and $.0946; The Whitaker Paper Company, $.0855 and $.0899; R. P. Andrews Paper Company, at $.0819 and $.0894; Thos. Barrett & Son, at $.0865, $.0875, and $.0915.

10,000 4-11/16 x 7¼—No. 32, O. S. G. Fine White Linen Envelopes: R. P. Andrews Paper Company, at $13.45 per M.; R. Carter Ballantyne, $10.94; Washington Loose Leaf Company, $17.50; Sherman Envelope Company, $5.35 per M.

2,190 lbs. 21 x 32½—109½, No. 60, Salmon Commercial Ledger Paper: Old Dominion Paper Company, $.2998 per pound; Mathers-Lamm Paper Company, $.1995; Dobler & Mudge, $.205, and The Whitaker Paper Company, $.1980.

50,000 7½ x 11½—No. 40 Manila Envelopes: R. P. Andrews Paper Company, $6.15 per M; Sherman Envelope Company, $7.97; The U. S. Paper Goods Company, $4.50.

50,000 10 x 14—No. 40 Manila Envelopes: R. P. Andrews Paper Company at $9.70 per M; Sherman Envelope Company, $11.80; and The U. S. Paper Goods Company, $7.00.

1,275 lbs. 17 x 28—25½, No. 20, Glazed Salmon Bond Paper: Ætna Paper Company, at $.134 per pound; Old Dominion Paper Company, at $.1989.

15,000 lbs. Calendered Tag Board, 24" rolls: Dobler & Mudge, at $.099 per pound; Whiting-Patterson Company, Inc., $.077; Whitaker Paper Company, $.0975 and R. P. Andrews Paper Company, at $.0764.

1,350 lbs. 16 x 21—18, No. 20 Fine White Glazed Bond Paper: Ætna Paper Company, at $.1623 per pound; Whitaker Paper Company, $.2833; Old Dominion Paper Company, $.2674; R. P. Andrews Paper Company, $.325; Dobler & Mudge, $.265.

16,000 lbs. 34 x 44—No. 10 Trunk Board: Whitaker Paper Company, at $73.00 per ton; Wilkinson Bros. & Co., $72.10; R. P. Andrews Paper Company, $162.00; Republic Bag and Paper Company, $70.40; Consolidated Paper Company, $60.00, and Dobler & Mudge, $68.00.

1,838 lbs. 17 x 28—Green Safety Writing Paper: R. P. Andrews Paper Company, at $.2508; Dobler & Mudge, at $.28; Geo. LaMonte & Son, $.238, and The Perfect Safety Paper Company, $.26.

1,838 lbs. 21 x 32—Green Safety Writing Paper: R. P. Andrews Paper Company, at $.2545 per pound; Dobler & Mudge, $.284; Geo. LaMonte & Son, $.238, and The Perfect Safety Paper Company, $.26.

The Mathers-Lamm Paper Company has been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 3,920 pounds of 22 x 28—196 of cardboard at $15.27½ per ream.

Dobler & Mudge have been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 16,000 pounds (3,200 sheets) of 34 x 44—No. 10 trunk board at $68 per ton. The R. P. Andrews Paper Company will furnish 15,000 pounds of pink and blue calendered tag board in 24" rolls at $.0764 per pound; and the Ætna Paper Company will furnish 1,275 pounds (50 reams) of 17 x 28—25½ lbs. No. 20 glazed salmon bond paper at $.134 per pound. Bids for these items were opened on June 19.

The R. P. Andrews Paper Company has been awarded the contract by the Purchasing Officer of the Government Printing Office, for furnishing 5,000 pounds of green calendered tag board in 24" rolls at $.0764 per pound, bids for which were opened on June 16.

The Ætna Paper Company will furnish 1,350 pounds (75 reams) of 16 x 25—18, No. 20 fine white glazed bond paper at $.1623 per pound, bids for which were opened on June 19.

Dobler & Mudge have been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 7,800 pounds (100 reams) of 38 x 48—78, No. 16 lithographic finish map paper at $.1648 per pound, bids for which were opened on June 12. Knowlton Brothers will furnish 21,900 lbs. (150 reams) of 33 x 46—146, smooth tea cover paper at $.0807 per pound, bids for which were opened on June 14. Crane and Company will furnish 1,000 sheets of 15 x 21—47, No. 56 Crane's artificial parchment paper at $.0567 per pound.

The Ætna Paper Company will furnish 72,000 lbs. (2,000 reams) of 21 x 32—36, No. 20 white glazed bond paper at $.1163 per pound; and Knowlton Brothers Company will furnish 4,800 pounds (100 reams) of 20 x 25—48, smooth pink cover paper at $.0847 per pound. Bids for these items were opened on June 16.

George LaMonte & Sons have been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 1,838 pounds (50 reams) of various sizes green safety writing paper at $.238 per pound, bids for which were opened on June 21.

Stoker Companies Merge

The Sanford Riley Stoker Company has merged its interests with the Underfeed Stoker Company of America and its affiliated companies, the A. W. Cash Company, valve manufacturers, Decatur, Ill.; the Craig Damper Regulator Company, Detroit, Mich., and the Underfeed Stoker Company, Ltd., of Canada. The products of the combined companies, which includes the Jones, Riley and Murphy stokers, makes one of the most complete lines of mechanical stokers ever brought together. Manufacturing will be concentrated at Detroit, Michigan and Worcester, Mass., and in Canada at Windsor and St. Thomas.

R. Sanford Riley becomes president of the combined companies, with F. H. Daniels as vice-president. S. A. Armstrong continues as vice-president and managing-director of the Underfeed Stoker Company of America.

Missisquoi Pulp Co. Loses $100,000 in Pulpwood

[FROM OUR REGULAR CORRESPONDENT.]

ST. ALBANS, June 19, 1922.—One hundred thousand dollars is the estimated loss sustained by the Missisquoi Pulp and Paper Company of Sheldon Springs from the rush of waters which swept away the boom on the Missisquoi river last night, which contained 4,000 cords of pulpwood and a half million feet of lumber in the log, company officials said today. Means were being discovered to salvage the pulpwood and logs which are scattered for miles along the river banks, while hundreds of cords which were swept along on the tide to the river's mouth will never be saved. The loss as placed by company officials today includes the cost of salvaging operations and the pulp and logs unrecoverable. Only comparatively slight insurance was carried, officials said today.

The Drinking Cup

Vortex
DRINKING CUP
(Patented)
June 20, 1916, Reissued June 13, 1922; March 26, 1918; April 18, 1922; Other Patents Pending
Canadian and Other Foreign Patents Granted and Pending
"One who manufactures, who uses, or who sells a device that infringes a patent is equally an infringer."
Look for our trade-mark "VORTEX" on all cartons and tubes

Vortex

The Cone-Shaped Pioneer

FOR years this cup has maintained an outstanding leadership, won and held through unrivaled superiority. Made of heavy quality paper, scientifically sterilized, strongly reinforced and perfect for utility and sanitation. Read the features which explain a few of the excelling points of *Vortex* Drinking Cups.

There is an unlimited market for *Vortex*. They sell easily at an excellent profit. The resale price is very low. *Write at once for prices and terms.* This line will prove profitable for you.

Vortex Features

Made of clean, strong, pure white paper.

Perfectly sterilized. Meet requirements of Pure Food and other existing Laws.

Outside reinforced with pure, fully refined paraffin wax. Strong and rigid.

No wax on inside. Tasteless and odorless.

No glue. Sealed with paraffin under pressure.

Spiral wrapping reinforces cup.

Extra reinforcement at bottom of cups prevents cups sticking together.

Will not absorb moisture or leak when left for an indefinite period.

Conveniently shaped; no holders needed.

Packed in dustproof cardboard tubes; shipped in sealed cartons.

Nested together and dispensed inverted, inside untouched by hands.

The Safety Zones

Vortex Drinking Cups are the safety zones of double protection.

They protect the user from infections directly traceable to the common drinking cup.

Protection to the seller is afforded that safeguards against legal action which may arise from the use of cups infringing on our fully protected patents.

THE VORTEX MFG. COMPANY

421-431 North Western Avenue, Chicago

Obituary

Mrs. William M. Parks

WEST SOMERVILLE, Mass., June 28, 1922.—Mrs. Amy Beach (Wood) Parks, wife of Dr. William M. Parks, of West Somerville, died at the Cambridge Hospital on Sunday, June 18. Mrs. Parks, who was the eldest daughter of Charles H. Wood, president of Edwin Butterworth & Co., Inc., and Mrs. Wood was born in Somerville, February 14, 1893. She attended the Somerville schools, graduating from the Somerville High School in 1911 and from Mt. Ida School in Newton in 1912. In 1918 she was married to Dr. Parks, a prominent dentist of West Somerville.

Besides her husband Mrs. Parks is survived by a little daughter, Willamena, two and a half years old, and a baby boy five days old; also by her parents, Mr. and Mrs. Charles H. Wood, of Bigelow street, and two sisters, Miss Hildegarde and Miss Rosamond Wood.

Mrs. Parks has been prominent in the social life of Somerville. A beautiful soprano voice and much dramatic ability have made her especially well known in amateur theatricals, where she has taken leading parts in many of the shows given by Somerville clubs. She has been for many years connected with Trinity Church, Boston, and for some time was active in the work among the young girls of that church.

Against Tariff on Wood Pulp

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 28, 1922.—A pamphlet is being circulated in Washington, entitled "Production and Consumption of Chemical Wood Pulp in the United States." While no name appears on the pamphlet, it is understood to have been circulated by the American Writing Paper Company and tells "why wood pulp should remain on the free list." The pamphlet says in part:

"The arguments presented herein are made on behalf of the converting paper mills of the United States. To us, chemical wood pulp is a raw material—our chief raw material—which we must buy in the open market. There is another class of paper manufacturers, the self-contained paper-pulp mills, who make their own pulp and convert it into paper; some of these offer us their surplus pulp, thus becoming at the same time both our suppliers and our competitors. The following charts show the division of the paper industry into these two groups and the inadequacy of the domestic supply of pulp to meet our needs, thus forcing us into the foreign market, chiefly Canadian.

"We oppose the imposition of a tariff on chemical wood on the ground that it would violate a basic principle of American justice in that it would discriminate against us, the converting paper mills (838 in number), all of whom buy pulp, in favor of our competitors, the self-contained paper-pulp mills, very few of whom have any pulp to sell as it is all consumed in the paper which they make. The nature and seriousness of this discrimination are briefly shown in the following pages. We earnestly request that chemical wood pulp be placed on the free list unconditionally."

The pamphlet continues: "Over the last five years, including both dull and boom periods, the converting paper mills have been forced to import, chiefly from Canada, slightly less than half of their chemical pulp. A duty on pulpwood, therefore, discriminates against the converting paper mill by increasing the cost of its chief raw material, the demand for which cannot be supplied by domestic paper mills."

During 1920, the statement points out, "an inferior quality of pulp was produced by shortening the cooking time, and the converting mills were forced to use this inferior pulp due to the shortage. Such pulp could not be used in a competitive market. Even under these conditions, the maximum domestic production falls short of the average domestic demand by 147,438 tons. The discouraging of pulp importation tends to place the converting paper mills as regards the quality of their raw material, and consequently of their finished product, at the mercy of the domestic paper-pulp producers, 97 per cent of whom are also their competitors in the paper market. A tariff on pulp discriminates against the converting paper mills, both in the cost and the quality of their product." The statement continues:

"Ninety-seven per cent of the mills making chemical pulp are primarily paper manufacturers. If these sell any pulp at all, it is their surplus only, and their tonnage available to converters varies inversely with the demand for paper. A duty on pulp would be equivalent to giving these mills an additional protection on their paper not shared by the converting paper mills, and is, therefore, a discrimination.

"A duty on chemical wood pulp would discriminate against 72 per cent of the paper mills in favor of 28 per cent of the paper-pulp mills in the country. Such an injustice to 72 per cent of the paper mills would jeopardize the paper industry of the United States and would tend to eliminate the very numerous small manufacturers.

"The chief product sold by the domestic chemical pulp producer is not pulp but paper. He sells only his surplus pulp, which is naturally least when demand for paper is greatest. The discouraging of the importation of pulp puts the converting paper mill at the mercy of his competitor, the self-contained paper-pulp mill, for his chief raw material.

"A tariff on chemical wood pulp discriminates against the converting paper mill by giving his competitor control of his raw material supply."

Urges Growing Trees in Ohio for Pulp

COLUMBUS, Ohio, June 20, 1922.—Growing wood for paper pulp offers a solution for the Ohio farmers' waste land and wash problem, according to Prof. N. W. Scherer, of the Department of Forestry, Ohio State University. The comparatively rapid turnover of investment and the valuable land reclaimed by the forest growth are features which make this form of timber growing particularly desirable, Scherer said. Little care is required once the planting is established successfully.

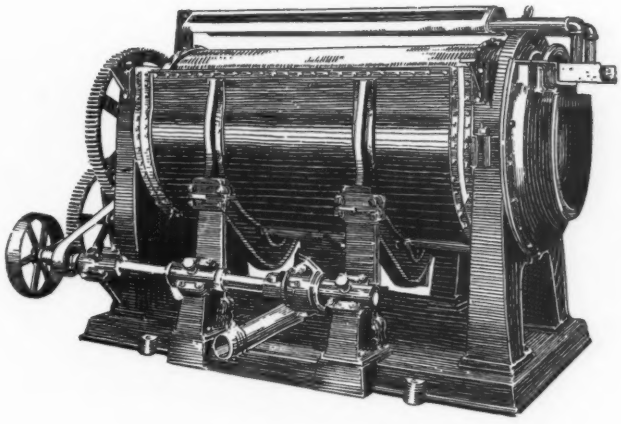
"That the waste land problem is of vital importance in Ohio is indicated by the amount of land which, each year, is lost to hillside erosion," Scherer declared. "The possibility of checking this loss by forest planting has been demonstrated by the experimental plantings of a paper manufacturing company at Chillicothe. Here a 'draw,' resulting from continued spring freshets which originally cut through the middle of the creek bottom farm owned by the company, was shifted back into the creek bed by planting useful pulpwood trees in the low area."

It is estimated at the rate of growth of one cord per acre per year, the crop would be ready for marketing in twenty years.

The most suitable species of plant, both from the growers' standpoint and that of the pulpmaker, Scherer advises, have been found to be the tulip poplar, the cottonwood, the silver maple and the willow. Common poplar has been found to be susceptible to fungus rot, and several insect injuries. The willow is recommended for extreme wet conditions and the silver maple seems to do best on poor soil. Care, other than thinning at the sixth and twelfth years, is unnecessary after the young trees have survived the competition of weeds.

Keyes Fiber Co. Enlarging Plant

FAIRFIELD, Me., June 29, 1922.—Improvements and additions are being made to the pulp mill of the Keyes Fiber Company at Shawmut, including an enlarged woodroom, and a four foot wood slasher and splitter. A system of wood conveyers which will carry pulpwood from piles to the grinder room via the slasher room is also being installed.



BIRD SCREENS

OF PARTICULAR VALUE TO PULP AND PAPER MILLS

Use them for

QUALITY They thoroughly screen the stock and make the sheet practically free from dirt, including cork, wood and rubber.

PRODUCTION The paper forms better and dries more easily because it is free from rough impurities which are likely to cause breaks or wet spots. The screens are automatically cleaned because there is no time out for washing up through the week. Slots are always open to uniform size. The screens do not cause variations in weight and thin paper which has to be sent back to the beaters.

ECONOMY The screens are self-cleaning. They need no screen boys and nothing more than casual attention from the machine crew. Any direct labor applied on cleaning screens is eliminated. The cost of maintenance is extremely low. Power consumption is very small. Plates last for years without renewal or recutting.

May we explain to you our CLOSED AND AUTOMATIC SYSTEM for pulp and paper mill screening?

BIRD MACHINE COMPANY

SOUTH WALPOLE MASSACHUSETTS

Western Representative:
T. H. Savery, Jr., 1718 Republic Bldg., Chicago, Illinois

Canadian Builders of Bird Machinery:
Canadian Ingersoll-Rand Co., Ltd., 260 St. James St., Montreal, Canada

88-221

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to paper and pulp field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister building, Washington, D. C., or Bush building, 130 West Forty-second street, New York, trade-mark specialists.

As an additional service feature to its readers, the PAPER TRADE JOURNAL gladly offers to them an advance search free of charge, on any mark they may contemplate printing or registering.

WALCO. No. 160,909. Walther & Company, New York. For surface coated, roll-printed, metal coated, and embossed paper.

BROMOGRAPH. No. 144,010. Bromograph A. G. Mannheim, Mannheim, Germany. For sensitized photographic paper.

VELTEX. No. 155,282. George Vincent, New York. For tracing paper.

TANAGER, above picture of a bird tanager. No. 160,333. J. C. Blair Company, Huntingdon, Pa. For paper for writing and printing purposes, drawing paper, pencil paper, envelopes, for correspondence, writing paper tablets, pencil tablets, drawing tablets, spelling tablets, and blank books.

RIEGEL'S JEWEL BRAND, with picture of jewel brooch in center. No. 159,673. Warren Manufacturing Company, New York. For glassine paper.

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 28, 1922.—Slow improvements in the condition of the paper trade are reported by Boston paper merchants especially along the lines of the high grade papers. Agents for mills in New England and in New York report that their mills are operating on fuller capacity now than they have for some time. Prices hold about the same in the high grade papers.

Mr. Waite of John Carter & Co., reports that the condition of the paper business in Boston is generally good although things are somewhat quiet due to the summer season and many of the men starting on their vacation. Many of the firms are conducting their sales campaigns as usual this summer to keep up the sales during their quiet months.

Paper box and box board manufacturers report that their end of the paper business is holding up because of the increased demands for commodities requiring their products. Shoe manufacturers are purchasing more paper boxes and other packing material than ever right now because of the increased demand for shoes.

Walter H. Claflin & Co., of Summer street, has sent out a new price list for Champion papers which includes prices on Aigrette Enameled Book paper, Hamilton Wedgewood and Hingefold Enamel, White Litho, Velvett white enamel, Champion colored coated, Koatine, Champion super, English finish, eggshell, machine finish, post card bristol and Hamilton post card as well as embossing cover paper, capitol post card, mimeograph paper, Champion bond and Champion index Bristol.

The Eaton Crane & Pike Company has been incorporated in Pittsfield with a capital of $500,000. The incorporators are David F. Silbey of Boston, Ralph Dunbar of Brookline, Arthur W. Eaton of Pittsfield, Felix Rackemann of Milton, Harrison M. Davis of Salem and William H. Eaton of Pittsfield.

Lynn W. Meekins formerly with the Bureau of Foreign and Domestic Commerce and former Trade Commissioner at Shanghai, China, has arrived in Boston and is assigned to the Boston district office of the bureau. He will take up his duties as manager of the bureau within a short time. Because of his extensive knowledge of the possibilities of shipping American paper to China and other eastern ports it is expected that he will be of great assistance to the paper merchants of this vicinity.

Several of the Boston merchants are busy working out plans for specializing in certain lines of goods, and obtaining the sole agency for the entire United States and doing away with competition which is proving disastrous in some cases. Some of the heads of Boston firms are, therefore, taking advantage of the quiet summer months to work out comprehensive plans looking toward such a solution. Further announcements will be made by several firms in the near future.

Canadian Exports of Paper for May

Exports of Canadian Pulp and Paper in May according to the Canadian Pulp and Paper Association, showed considerable improvement over the previous month and over the corresponding month of last year. The total value of the exports was $8,522,830 compared with $6,490,359 in April and $7,929,525 in May, 1921.

The increase in exports in May was not confined to any single commodity but was shared by all grades of pulp and paper; pulp exports showed an increase of approximately 70 per cent over the April exports.

While the actual value, compared with the value in May, 1921, does not show a great increase yet the quantity of the exports is appreciably greater than for last year in the case of news print paper and all grades of pulp, except groundwood.

The figures for the months of May, 1921, and 1922, are as follows:

	May, 1921		*May*, 1922	
Paper:	*Cwts.*	*Value*	*Cwts.*	*Value*
News Print	883,557	$4,682,393	1,515,657	$5,361,102
Book Paper	1,364	18,909	562	4,544
Other Paper and Mnfrs.	....	561,946	....	414,023
Total Paper		$5,263,247		$5,779,669
	May, 1921		*May*, 1922	
Pulp:	*Cwts.*	*Value*	*Cwts.*	*Value*
Sulphate (Kraft)	158,050	$664,085	251,490	$763,505
Sulphite Blchd.	88,369	508,642	336,698	1,106,525
Sulphite Unblch.	187,398	739,263	225,537	594,580
Mechanical	326,299	754,288	238,244	278,551
Total Pulp	760,116	$2,666,278	1,051,969	$2,743,161

The principal countries of destination of these exports in May, 1922, were:

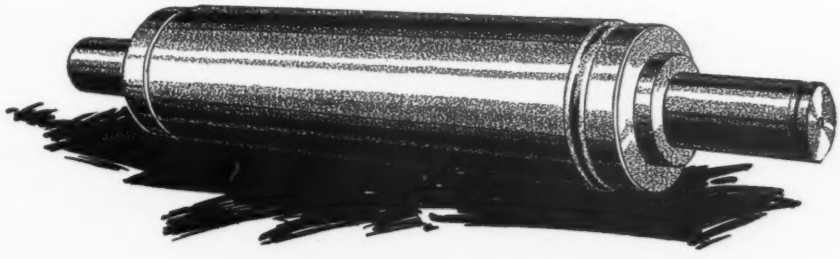
	Paper	*Pulp*	*Total*
United States	5,300,688	$2,633,453	$7,934,141
United Kingdom	119,331	67,822	187,153
All Other	359,650	41,886	401,536

Exports of pulpwood in May were 75,702 cords valued at $740,287 compared with 49,076 cords valued at $476,344 in April, and 54,914 cords valued at $717,818 in May, 1921.

Belt Conveyor Bulletin

The Jeffrey Manufacturing Company, of Columbus, Ohio, has recently issued Bulletin No. 369, illustrating and describing a new Jeffrey Material Handling Product, The Jeffrey Portable Belt Conveyor. This conveyor was built universally to meet the demand for a light, durable and inexpensive conveyor for loading and unloading coal, coke, cinders, sand, gravel, crushed stone and similar materials, and may also be used for handling such materials as bricks, tile, small boxes and bags.

Two or more of the conveyors may be used together to extend storage pile, or the Portable Belt Conveyor may be used as an extension conveyor to storage pile in connection with the Jeffrey Portable Car Unloader. Operated by either electric motor or gasoline engine, the capacity varies from 20 to 50 tons per hour, depending upon the kind of material handled and the methods used in loading the conveyor.



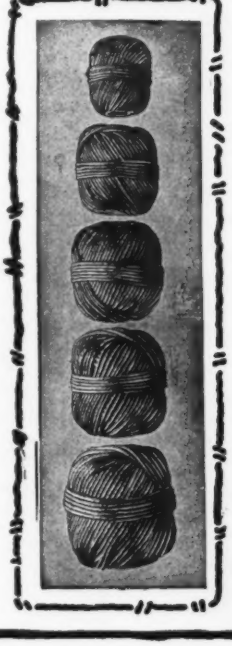
SUPER CALENDER ROLLS

The final touch is given your paper stock by the Calender Rolls. For half a century our rolls have been putting that finishing touch upon papers that have an acknowledged superiority.

THE APPLETON MACHINE COMPANY

APPLETON WISCONSIN

"AMERICAN"



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CORDAGE

New York Trade Jottings

S. Goldman, of the Perkins-Goodwin Company, is reported to be recuperating from over a month's illness in the hospital.

* * *

Henry D. Bigelow, salesman for Atterbury Brothers, Inc., 145 Nassau street, has changed his name to Henry Forbes Bigelow, Jr.

* * *

The Ireland & Nelson Paper Company, of 362 West 15th street, New York City, has recently changed its name to A. G. Nelson Paper Company.

* * *

The Committee of Admissions of the American Wood Pulp Association held a meeting Tuesday, June 27, at the offices of the Association, 347 Madison avenue, to consider new applications.

* * *

The firm of Shapiro & Byne, dealers in paper and twine, has recently incorporated under the laws of New York with an announced capitalization of $25,000. The attorney for the new concern is H. J. Sokolow, 376 Fifth avenue.

* * *

George D. Bearce, engineer of the News Print Service Bureau, is continuing his tour of Canadian news print mills after having attended the Summer Convention of the Technical Section of the Canadian Pulp and Paper Association.

* * *

The Gardner, Hogan Paper Company, Manhattan, has been incorporated in New York by W. H. Crawford, A. B. Gardner and J. H. Hogan, with capital stock placed at $25,000. The attorneys are Lane & Logan, Woolworth Building.

* * *

Sam Bleyer & Co., dealer in paper and hardware supplies, located at 144 W. 17th street, New York, has recently incorporated under the laws of New York with a capitalization of $10,000. The attorney for the company is A. B. Albert, of 305 Broadway.

* * *

Joseph H. McCormick, formerly vice-president of Henry Lindenmeyr & Sons, was recently elected president and general manager of the American Paper Mills Corporation, 237 Lafayette street, at a special meeting of the board of directors of that corporation.

* * *

James McGee who has been with Geo. W. Millar & Co., and Geo. W. Millar & Co., Inc., for the past 45 years has been elected a director of the corporation to fill a vacancy for an unexpired time. George W. Hall, who has been with Geo. W. Millar & Co., and Geo. W. Millar & Co., Inc., for the past 34 years, was elected secretary.

* * *

A cablegram of a single word announced the safe arrival on Tuesday, June 20, of Dr. Hugh P. Baker, Executive Secretary of the American Paper and Pulp Association and George W. Sisson, Jr., of Potsdam, former president of the Association, at Gothenburg, Sweden. They will make their headquarters at Stockholm during their stay in Sweden, Norway and Finland.

* * *

Paul N. Marx, formerly assistant to Leonard H. Bogart of W. M. Pringle & Co., Inc., has associated himself with the Milton Paper Company, 110-112 Greene street, New York. Mr. Marx will be in charge of the wholesale department, assisting Mr. Bogart who recently resigned from W. M. Pringle & Co. to take charge of the sales and purchases of the Milton Paper Company.

It has been announced that bonds of the Lincoln Paper Mills, Limited, will be offered by a syndicate headed by Fenton, Davis & Boyle and A. C. Allyn & Co., New York, to the extent of $1,000,000 at par and interest. The issue consists of first mortgage 7½ per cent sinking fund twenty year gold bonds which are secured by a first closed mortgage on all fixed assets of the company, including specifically its Merritton Mills, Canada.

* * *

Peabody, Houghteling & Co., 10 South La Salle street, Chicago, announces the offering of $1,000,000 worth of first mortgage, seven per cent, sinking fund gold bonds issued by the Mead Fibre Company, of Kingsport, Tenn. These bonds are dated July 1, 1922, and are due in fifteen years from date. The Harris Trust and Savings Bank of Chicago, is trustee, and principal and semi-annual interest are payable at that institution as well as at Harris, Forbes & Company of New York.

* * *

Shuttleworth, Keiller & Co., Inc., were recently forced into bankruptcy through their inability to collect money loaned to the Ironsides Board Company and the Kolb Carton Company, which, according to Mr. Shuttleworth is around $400,000. Shuttleworth, Keiller & Co. are dealers in paper products, located at 474 West Broadway. The following companies filed the bankruptcy petition: New York Machinery Company, $631; Sylvia Miller, $7,500; Harry G. Jones & Co., Inc., $5,000. Frank L. Moore, of Watertown, former president of the American Paper and Pulp Association, together with John O'Conner were appointed receivers under $15,000 bond by Judge Manton. The liabilities of the company are not, as was stated in a New York paper, $100,000,000, but are said to be in the neighborhood of $100,000 with assets about $30,000.

N. Y. S. Forests to Be Visited by Canadian Foresters

SARATOGA, N. Y., June 28, 1922.—The forests of New York State, which leads the nation in the actual reforestation of its cut over lands, will be visited by the foresters of the Canadian paper manufacturers the middle of July, when the Woodlands Section of the Canadian Pulp and Paper Association will make an automobile tour of northern New York, ending at Saratoga, Thursday, July 20.

The paper mill foresters of the United States, represented by the Woodlands Section of the American Paper and Pulp Association have been invited by the Canadians to make the automobile trip also.

The trip will be chiefly a tour to study the practical reforestation under way in New York State, in which the American paper industry has taken an active leadership. The American manufacturers have a technical forester for their executive officer in Dr. Hugh P. Baker, formerly dean of the New York State College of Forestry, and the secretary of the Woodlands Section, O. M. Porter, was also secured from the faculty of the State Forestry School. The New York reforestation campaign is taken as a model in the national legislation being asked for forestry by the American Newspaper Publishers' Association, the American Paper and Pulp Association, the American Forestry Association and similar organizations. The Snell bill, introduced and being pressed by these associations, was sponsored by B. H. Snell of Potdsam, N. Y., who asks the nation to promote the practice of forestry in other States as it is now being developed in New York.

The Canadian visitors will leave Montreal by motor July 17, visiting the Delaware & Hudson plantation the first day, and on July 18, visiting the New York plantations in the vicinity of Lake Clear, Saranac and Placid Lakes, and the operations of the Oval Wood Dish Company at Tupper Lake.

The Pruyn woods operations between Newcomb and Chestertown will be visited on July 19, and the last day, July 20, will be devoted to the State nurseries near Saratoga.

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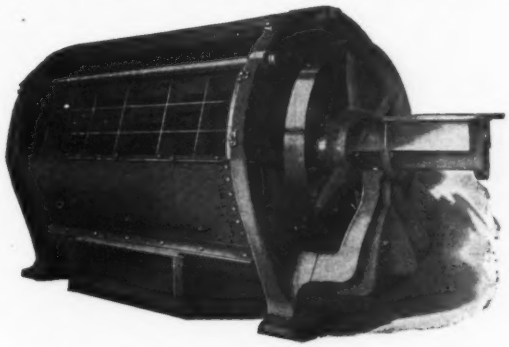

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Canadian Technical Section Holds Convention

Approximately three hundred persons attended the banquet which came as a culmination of the summer Convention of the Technical Section of the Canadian Pulp and Paper Association. A special private pullman car was arranged for, starting at Montreal. It is estimated that seventy-five visiors were in attendance.

The Toronto contingent was taken on at North Bay, the entire party arriving at Iroquois Falls the evening of Tuesday, June 20. While a portion of the party slept in the private car, which was on a siding, the rest were entertained by the Abitibi Power and Paper Company at its hotel and by various individuals connected with the company.

Aside from the opportunity of inspecting the plant, entertainment consisted of a banquet provided by the Abitibi Company under the efficient direction of its hotel keeper, James Kingston. There was also a smoker in the Community Hall, with entertainment by local talent, and on Thursday morning a lecture illustrated with lantern slides showing the progress of the company was given by the Abitibi Service Department. One of the out standing features of the smoker entertainment was the induction of O. F. Bryant, Chairman of the Technical Section, into the order of Indian Braves, which is peculiar to the northern Ontario region. On Wednesday afternoon the party was treated to a ball game between Iroquois Falls and Timmins, Ont., at which Iroquois Falls triumphed to the tune of 13-2, greatly to the satisfaction of the local organization.

The comfort of the party en route was taken care of by a representative of the T. & N. O. Railway who travelled with the delegation. Others in charge of the outing were: O. F. Bryant, Chairman of the Technical Section; F. Beck, Secretary of the Canadian Pulp and Paper Association, Montreal; M. Stevenson, editor *Pulp and Paper Magazine;* and George Carruthers, President of the Interlake Tissue Company, Meritten, Ont.

Among the visitors from the United States were: Ross Campbell, Holyoke, Mass.; Charles R. Tait, Erie, Pa.; P. A. Paulson, Meenah, Wis.; K. T. King, Chicago; W. G. MacNaughton, secretary Technical Association of the Paper and Pulp Industry, and George D. Bearce, of New York, and L. J. Parent, of Woodland, Me.

In attendance at the convention was Chas. Williams, Assistant General Manager of the Hollinger Mines, Timmins, Ont., who extended a cordial welcome to the members to visit their property. Mr. Williams also provided a lantern-slide lecture on the Hollinger Mines.

Of particular interest to the members of the Section was the operation of the two largest news print machines in the world, built by Charles Walmsley.

Courtesy and hospitality were the keynotes of the entire affair and the visitors extended a very hearty vote of thanks to the local committee of arrangements, headed by Rex Hovey, as well as to R. A. McInnis, Manager of the Abitibi Company, J. A. Vanier, Mayor of Iroquois Falls and the representative of the T. & N. O. Railway.

Frank L. Moore Returns From California

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., June 26, 1922.—"There were 25,000 Shriners present and we were given the finest entertainment the Imperial Council has ever enjoyed," said Frank L. Moore, former president of the Newton Falls Paper Company, upon his return Wednesday from San Francisco as delegate from Medina Temple. For several years he has been one of the local delegates. He was five weeks on the trip, passing considerable time en route.

"The problem of establishing hospitals for crippled children was the most important matter before the Council," said Mr. Moore, "and millions of dollars are being expended for this work throughout the country."

Mr. Moore is a director of the Golden West Oil and Development Company with large holdings in the oil belt of Montana, and he stopped off at Lewistown on his way to San Francisco and inspected the property. He said that a well on adjacent property had just "come in" which is now yielding 28,000 gallons of oil a day, and that his company has a well drilled to a depth where it should have proven itself by this time had it not been for rainy weather which is very severe there this spring. There is so much mud that supplies and equipment can not be moved over the roads.

The wheat crop in Montana was reported as a record breaker. Mr. Moore told Attorney W. W. Kelly that he saw his wheat fields and they were fine. The price of sheep has advanced from $5 last fall to $20 now and wool is selling there at 40 and 42 cents a pound.

In speaking of his personal plans in the papermaking field Mr. Moore said that he has several propositions under consideration but that he has reached no final decision as to what he will do.

President Raybold Names Advisory Committee

President W. J. Raybold, of the American Paper and Pulp Association has named an Advisory Committee from the paper industry for the Paper Section, United States Bureau of Standards, for the new association year. A meeting of the committee has been called for July 10, at Washington, to discuss with Dr. J. W. Stratton, Director of the Bureau of Standards, the work now in progress and projected by the Bureau. Some of the matters under consideration were discussed by Dr. Stratton with leading members of the paper industry during the April convention in New York, but more detailed explanations of the work will be given at the Washington meeting next month.

Many of the committee, including the chairman, A. H. Nevius, were on last year's committee, but the entire committee for 1922-23 follows:

A. H. Nevius, vice-president, Miami Paper Company, West Carrollton, Ohio; George A. Galliver, president, American Writing Paper Company, Holyoke, Mass.; M. E. Marcuse, president, Bedford Pulp and Paper Company, Richmond, Va.; G. Frank McElwain, vice-president, Crocker-McElwain Company, Holyoke, Mass.; H. E. Fletcher, president, Fletcher Paper Company, Alpena, Mich.; R. S. Hatch, Hamersley Manufacturing Company, Garfield, N. J.; Fred C. Clark, general manager, Pejepscot Paper Co., Brunswick, Me.; Frank L. Stevens, president, Stevens & Thompson Paper Company, North Hoosick, N. Y.; H. W. Stuart, The U. S. Paper Goods Company, Cincinnati, Ohio; Alexander Gibson, Allied Paper Mills, Kalamazoo, Mich.; W. J. Raybold, B. D. Rising Paper Company, Housatonic, Mass., Ex-Officio; Dr. Hugh P. Baker, Executive secretary, American Paper and Pulp Association, 18 East 41st street, New York, Ex-Officio.

High Water Shuts Down Maine Mills

BANGOR, Me., June 27, 1922.—Maine paper manufacturing plants are being inconvenienced by the heavy rains of the past few days, which have swollen rivers in all parts of the state. The Warren Paper Mills at Westbrook was among those forced to shut down on account of the sudden influx of water. The total rainfall during the past 48 hours has been 5½ inches. There is a bright side to the situation, however, as storage reservoirs are being filled so that mills can be run by water-power much later than usual, thus conserving their limited supply of coal.

McMillin Box Factory at North Adams Burned

[FROM OUR REGULAR CORRESPONDENT.]

NORTH ADAMS, June 28, 1922.—A fire of unknown origin started in the main part of the factory of E. A. McMillin Company early Thursday morning and before the firemen got it under control damage to the extent of $50,000 was done.

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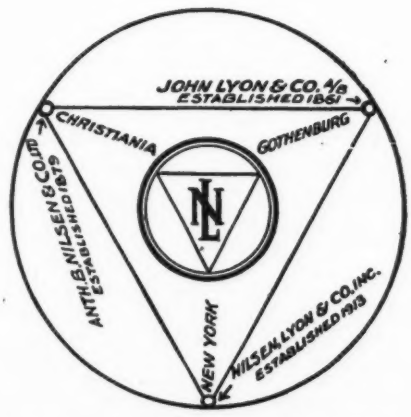

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Editorial

Vol. LXXIV New York, June 29, 1922 No. 26
FIFTIETH YEAR

Handling Overhead

A strong appeal is made to business men by J. H. Tregoe, secretary-treasurer of the National Association of Credit Men to handle their overhead fearlessly, to bring them into proper proportions to the added value of commodities produced and sold in order that the future shall not be mortgaged by diminishing the reserves set aside from the added value after providing for all costs including interests and dividends. Thus may be built up the capital which is going to be needed when the revival comes. Overhead is not only difficult, but very delicate to handle.

Most men admit that one of the biggest problems in business today is the overhead. Construction costs in manufacturing, particularly, have been handled successfully in a large measure, but the overhead has not been handled successfully and is exercising a very profound effect on profits.

A careful review was recently made of one of the active trades of the Central West manufacturers and wholesalers. This review indicated that in the particular trade concerned, the cost of doing business increased from 15.14 per cent of distribution in 1920 to 19.14 per cent in 1921. In this particular trade the overhead increased 45 per cent from 1916 to 1921. Segregating the various items, in a period of two years from 1919 to 1921, there was an increase of 12 per cent in the salaries of principals, an increase of 31 per cent in house salaries and a 200 per cent increase in bad debts. The increase in interest was 8 per cent and certain forms of service 100 per cent.

These figures are not exceptional. They are typical. They indicate plainly what happened to business in the last two years. The expansion of manufacturing plants and in a diminished measure by wholesalers in 1919 created an increased fixed charge for interest and other forms of overhead. The increase in taxes is really staggering.

It is beneficial to consider these figures if it is really desired to know what happens to profits and what are really the undercurrents of successful business. The figures also indicate one of the reasons for the business cycle.

There is an increase of fixed charges in a period of prosperity; there is the failure to reduce salaries and overhead in a period of depression. These together cause the recurring waste and the ups and downs of the business enterprise.

A skillful appreciation of values, a proper balance in the appraisal of plans is quite rare and difficult of attainment. We blow either too hot or too cold. This is the reason why so many mistakes are made in conducting business and in formulating plans.

The lowering of production and distribution costs is a worthy objective. In the rapid development of a business which often results in the different parts of a business getting out of alignment so that efficiency is lost, it suddenly occurs to the officers, perhaps, to try methods which would tend to greater efficiency. They turn to a class of workers designated as efficiency engineers. These experts, instead of appraising efficiency engineering for what it is actually worth and not overplaying it to the extent of really increasing the cost of production, begin to measure everything in terms of method and make plans superior to the men who built the business up to its splendid proportions.

After all, a business is no better nor worse than those operating it. The business reflects exactly the character, the ideas, the creative powers back of it. Merely to install efficiency methods without correcting defects in the ability, intelligence or skill of the operators is falling short of the desired purposes and intensifies mechanics at the expense of humanity. To make business more efficient, that is, to make it more productive and a greater service to the public, every human unit should be made to fit the niche it is best qualified to fill, and with improvements in the personal elements and the personal skill, there is no doubt of greater profits and better service.

The disposition on the part of efficiency experts has been to subordinate the human to the mechanical, when the reverse process is a better guarantee of success and progress. Never must the human be subordinated to mere machine methods. Development comes only with freedom of initiative, with training to assume responsibilities, with strict attention to firmly fixed objectives. It is not intended to depreciate the value of system and efficiency within reasonable limits. It is merely intended to emphasize the need of elevating the human side of a commercial enterprise. How to build up the human skill, human perseverance, human ideals, human objectives, must be our chief consideration and the chief consideration in any plans looking toward success and service in a business enterprise.

Employment Increasing

Figures compiled by the Bureau of Labor Statistics, Department of Labor, confirm the impression that paper mills have been running to considerable larger capacities in recent weeks. The figures referred to show employment and wages paid in the paper mills of the country reporting to the Bureau in the months of May, 1921, and May, 1922. There were 59 paper mills reporting, and their report shows that the employment in May of last year was 22,289 persons, as compared with the same month of this year, when 25,953 persons were employed in these 59 mills, showing an increase in employment of 16.4 per cent. The pay rolls also showed an increase from $537,926 paid in May of 1921, as compared with $606,423 in the same month of this year, an increase of 12.7 per cent.

The Bureau also shows a comparison between the employment and wages paid in 59 paper mills during the months of April and May of this year. In April there were 24,581 persons employed in these mills, increasing to 25,953 employed in May, an increase of 5.6 per cent. The pay rolls also showed an increase from $565,711 in April to $606,423 in May, an increase of 7.2 per cent.

The Bureau in connection with changes in wage rates and per capita earnings during the period of April 15 to May 15, 1922, in the paper industry, says that: "One mill gave an increase of 20 per cent to the employees. A wage decrease of 6 per cent, affecting all employees was reported by another establishment. An increase of 1.6 per cent was noted for May per capita earnings over April figures."

Municipal & Business Branch
Municipal Building

Conditions in Binders Board Industry

JERSEY CITY, N. J., June 21, 1922.

Editor, PAPER TRADE JOURNAL:

It has occurred to us that it may prove of interest to your readers to know something of the conditions existing in the binders board manufacturing industry, and we are glad to give you the following information.

It is the custom among the binders board manufacturers the same as other industries to compare notes as to general conditions, and we find that with very few exceptions there have been no changes in the selling price of the commodity since the first of the year. There have been, however, gradual increase in costs of manufacture. The coal strike has added to the per ton cost of paper due to rise in coal prices. The paper stock dealers have been slowly advancing their prices. This last week the felt manufacturers increased their prices, and so it has been going right down the line, and over a four or five months' period we find that our costs have increased about $5.00 per ton, and inquiry among the local paper stock dealers makes us believe that the price of paper stock is going to go even higher.

We have been selling long enough at this one price with costs running fairly uniform to indicate to the manufacturers in general that at the present selling price there is not sufficient profit in the boards to take care of overheads and depreciation, and it therefore means that there can be but one change, and that will be upward.

We do not anticipate that there is going to be any sudden advance through the whole industry, but as soon as the trade begins to get better, the purchasers of boards such as the binders board manufacturers produce will find themselves then not only with high prices, but with the shortage in supply. This is a trade matter which we know some of your readers will be interested in, and you can use it as you see fit in your news columns.

Respectfully yours,

W. O. DAVEY & SONS.

By L. D. DAVEY, President

The Tariff on Paper

PORT EDWARDS, Wis., June 20, 1922.

Editor, PAPER TRADE JOURNAL:

I was at Kalamazoo at the annual banquet of the American Paper and Pulp Mill Superintendents' Association and listened to a very able address by Congressman P. J. Kelly, of Michigan, on the reasons why we don't get a tariff on paper. Congressman Kelly spoke many truths, but I believe at least one more reason exists that the newspapers of the country do not want a tariff on news print or on any of the ingredients from which it is made because it will mean a slightly higher cost of white paper to them.

Some years ago Colonel A. J. Blethen, then editor of the *Seattle Daily Times,* argued that it made no difference to him whether men in this country were employed or not; that he was running a daily newspaper and had to consider many things, and among them, the cost of white paper; that if he could buy cheaper paper from Canada or Norway was a matter he had to consider, and selfishly consider, before paying more for paper made in the United States. As a matter of fact, he contracted for paper from Canada, and not many months hence, he said to me: "McBain, I was wrong. Business is rotten, as evidently others in other lines are doing what I am doing, buying foreign made goods and as a result American workmen are out of work, out of money and cannot buy. Advertisers cannot afford to buy space, readers have cancelled subscriptions and business is dead. If I could do it over again, I'd buy your paper, if I could, but call back those good old times."

I will remember his talk to my dying day, because the old colonel meant every word he said.

In addition, he wound up, "McBain, your talk of a year ago all comes back and you've almost made a tariff editor out of me." The Colonel died some years ago, but his newspaper continues in the new home he provided for it. At the same time there are now hundreds of others as he was, who are probably almost daily threatening our congressmen with complete political extinction if they consider protecting the American workman and manufacturer of the news print paper industry. How can workmen and manufacturers of other paper be consistently protected if those manufacturing news print are not?

Philip Dodge, president of the International Paper Company, in his speech at the annual convention of the American Paper and Pulp Association in April in New York said, in part:

"What we need is a tariff on paper in the United States to protect our labor. Canada has cut off the supply of wood to America. Mills were built in the United States to use Canadian wood, but Canada insists that this wood must be made into pulp in Canada, employing Canadian labor and paying taxes in Canada, and this is allowed to go into the United States free.

"Our Congress is made up of United States newspaper men and most of those men are looking for the same job again at the next election. That is what we have to face. I believe we will find, when Congress adjourns, we will have no protection on news print paper."

While the American Paper and Pulp Association has a committee in charge of this tariff matter both at New York and at Washington, I believe the place to make its influence felt the most is through the electorate by letting the public know the problems of the paper manufacturer and his workmen and get the public to demand of Congress that a tariff be put on paper and paper pulp, the same as they have demanded for other things.

B. T. MCBAIN, of Nekoosa-Edwards Paper Company.

Printing Committee Arranges for Paper Bids

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 28, 1922.—The Joint Committee on Printing at its meeting last week authorized the opening of paper bids for a six months' supply for the Government Printing Office, resolved:

"That the samples and specifications of paper for the public printing and binding which were submitted by the Committee on Paper Specifications with its report of December 7, 1921, be, and the same hereby are, adopted as the standards of paper for the different descriptions of the public printing and binding for the term of six months or one year beginning September 1, 1922."

The Joint Committee authorized the appointment of a specifications committee. It is rather unusual to appoint the committee at this time, but this has been done in order that the committee may organize and if it desires hold hearings with paper manufacturers. The Joint Committee has authorized the addition of one new member to the specifications committee and the resolution authorizing the appointment of the specifications committee by the Joint Committee is as follows:

"*Resolved,* That a committee consisting of one representative each of the Bureau of Chemistry and the Bureau of Standards; Three representatives of the Government Printing Office, one of whom shall be a paper expert; one representative of the Permanent Conference on Printing, and the Clerk and Inspector of the Joint Committee on Printing, be requested to prepare standard specifications and samples of paper which it deems suitable for the public printing and binding, having due regard for economy, and submit same together with a proposal form and recommendations as to the standardizing, testing and use of paper by the Government, to the Joint Committee on Printing on or before December 6, 1922, for its consideration in fixing upon standards of paper for the different descriptions of the public printing and binding for the term of one year or six months beginning March 1, 1923."

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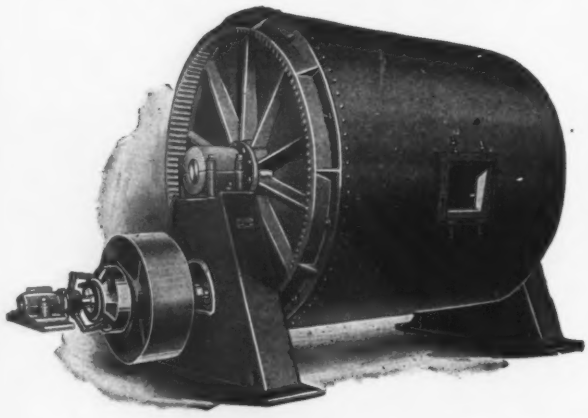

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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

BOILER HOUSE CONTROL

By M. B. Littlefield, Fulton, N. Y.

The proper control of the capital invested in the boiler house and coal used represents one of the best opportunities at present of reducing costs in most plant operations. The higher coal prices go, the more urgent becomes the need of getting the best economy from the boiler house. This requires close co-operation between the executive who controls the funds for fuel and new equipment, and the engineer who uses them. Unless the executive will take the expert advice of his engineer, he must give his own time to investigating ideas that might mean a saving and then after collecting the facts draw his conclusion. An executive watches the raw material entering into the product with the utmost care. Does he usually watch his coal pile with the same attention? If we calculate the saving due to a decrease of 10 per cent in the coal required in a 1,000 B. H. P. plant and assuming average efficiency with coal at $5.00 per ton, we find a saving of $7,000-$8,000 per year. With the possibility that such a saving can be made in most plants, we will now consider how it may be done.

In considering the various methods of boiler house control, it is perhaps first advisable to make a material "input-output" balance in order that the various factors can readily be seen. The following is the balance with the factors subdivided for means of identification:

Input

Fuel—
- Kind.
- Grade—adaptability.
- Rate of firing.

Water—
- Temperature of feed water.
- Quantity.

Air—
- Temperature.
- Quantity.
  - Primary.
  - Secondary.

Output

Steam—
- Quantity.
- Temperature and pressure.

Flue Gases—
- Temperature.
- Quantity—per cent.
  - Carbon dioxide.
  - Combustible gases.
  - Excess air.

Ash—
- Quantity.
- Analysis.
  - Per cent combustible.
  - Fusing temperature.

Control Methods—Fuel

The fuel to use depends on the economic availability of fuels in the vicinity. It may be coal, fuel oil, gas, refuse from mill operation such as sawdust, wood refuse, sugar cane refuse, or electricity. The last is of course unusual. Conditions of possible use exist only in exceptional situations. Coal, fuel oil and gas, are fuels which are purchased while wood refuse and sawdust or pressed sugar cane are usually waste from the industry. We will therefore narrow our field to coal, fuel oil, and gas and consider the grades of these and their bearing on the efficiency of the boiler house.

The manner in which the grade of coal is controlled depends on the purchasing. To buy the lowest priced coal on the market is no control at all. Buying from the jobber somewhat minimizes the variation. That is, he usually handles coal from the same mine, but otherwise variation in quality can occur. For every designed furnace and type of stoker there is a particular grade of coal which will give best results. Some furnaces require a long flame, coking coal and others a short hot flame. Such factors limit the grade of coal for most efficient operation. If a coal of high volatile is fired in a furnace of too small combustion space, either high excess of air is found or losses due to unconsumed combustible gases are sure to exist. The kind of coal and the nature of the ash controls pit losses. The size of the coal is important. It is thus seen that the price of the coal is but a small part of the story. It must be balanced with the efficiency of the coal at that price. Some coals go through a stoker-fired furnace like so much dirt with a very low efficiency, when a different kind of coal of the same price would have given steam at a much lower cost. We should know the whole case from price to results and then pick the best, knowing that there are substitutes to cover unforeseen conditions.

Similar knowledge is necessary in the case of fuel oils and gas except that in these cases, the furnaces must be designed for the fuel to a much greater extent than in the case of solid fuels. There

is also much more uniformity in the material. We will therefore consider the usual type of fuel-coal.

Coal

The grade having been fixed, the best method of purchasing is on a contract basis from the mine. The responsibility for heat of combustion, the moisture, the ash, and the size of the coal can then be placed and checked with the specifications. The whole situation is then in hand and the coal supply can be controlled.

Many plants have neither the facilities for analysis of their coal nor have an engineering staff for technical advice, but there are in many parts of the country engineering firms who specialize on fuel and its combustion and co-ordinate this information with plant operation. Their services are usually paying investments.

The rate of firing is controlled by the speed of the stokers or hand firing, depending on the steam requirements. The rate of firing should be more accurately known than that there is a "heavy load" or "light load." Coal scales and steam production records for each individual boiler give this information regularly and accurately. The cost of such equipment often appears prohibitive, but it indicates the variation in the coal fed and the steam produced per boiler. Well, what good is this? If one boiler is using a higher amount of coal without a corresponding increase of steam produced, then the tubes may need cleaning, the air regulation may be faulty, or the fire is not being fed properly. This record of variation has located a loss which would have otherwise been unnoticed. Corrective steps can be immediately taken. The saving will usually offset the cost of equipment in a short time.

Feed Water

The temperature of the water usually depends on the operating equipment, load conditions, and the amount of "make up" water. It can best be secured by a recording thermometer. If the feed water temperature fluctuates, the return from the equipment or engines is not uniform in quantity. If it is always low, the advisability of an economizer should be seriously considered, provided stack conditions warrant it.

The amount of water to be supplied to the boilers varies of course with the steam load and is controlled by the feed water regulators, and measured by meters. From the amount of water fed and the amount of coal used the "pounds of water evaporated per pound of coal" can be calculated. A comparison of this with standards of other mills or with the makers' guarantee enables one to estimate relative efficiencies. Without a knowledge of the amount of coal and feed water fed per boiler, we do not know where we stand.

Air Supply

The flue gas temperature and the amount of primary and secondary air are changed by the draft variations, and by openings around the furnace. There is, however, in most cases, no direct control over the exact ratio and amount. It can be controlled by analysis and recording the temperature of the flue gases and from the result figuring back to the causes. The various methods will be considered below.

Steam

Steam pressure control is required by law. Every boiler has a pressure gauge. The temperature is recorded where necessary to control superheat.

Flue Gases

In the flue gases is the source of most of the operating loss. The loss varies from 15-40 per cent depending on the control. The various forms of control list as follows:

1. No control.
2. Temperature of flue gases.
3. Draft gauges.
4. Calibrated draft gauges.
5. CO_2 Recorders.
6. Duplex flue gas recorder.

No control is the unfortunate condition that exists in many plants. How many managers make investments without taking any precautions that they will give a good return? Coal is but a form of money. Let us control its use in the most efficient manner possible.

The temperature of the flue gases gives an indication of the heat that is lost but it does not give any indication of a remedy. If the air is increased to reduce the temperature of the flue gases, the loss remains the same but takes the form of heat in excess air. Other information is necessary.

Draft gauges show how constant the operation is but give no information as to whether there is enough or too little air present for efficient combustion. No remedy is indicated. This is not sufficient information.

Calibrated draft gauges are a little improvement. The pressure drop through a boiler setting is determined at the same time that gas analyses are made over a period of about twenty-four hours. A standard is then set which says that with a pressure drop of so many inches in a particular furnace the percentage of carbon dioxide will be a certain value and the operators try to keep the gauge at this point. But no account is taken of these factors:

1. Grade of coal.
2. Relation of primary to secondary air.
3. Poor fire-holes.

If a change is made from a low volatile to a high volatile coal, more air is needed to get complete combustion in the limited combustion space. The draft gauges should read more air, but the standard has been set and there it is held, allowing heavy stack losses. This of course can be remedied by a complete recalibration of the equipment but this work and expense for every coal is inadvisable.

In measuring the quantity of air passing through the boiler setting no account has been taken of the distribution of the air. Some furnaces need secondary air over the fire to get complete combustion with high volatile coals. It is measured the same as primary air which has passed through the grates. The effectiveness of secondary air depends, however, on its ability to mix thoroughly with the products of distillation and partial combustion, prevent stratification of the gases and give as high a per cent of carbon dioxide as is possible with no unconsumed combustible gas.

Poor fires are indicated on calibrated draft gauges by the rate of steam generation becoming less than usual for the same amount of air. This happens eventually but this lowering of rate of steam generation due to incomplete oxidation of the carbon will lag. Heat will be given out by surroundings until the difference between the products of combustion and the boiler tubes becomes less than usual. The time of this lag cannot be stated, but measuring the completion of a chemical reaction by the effect of its heat of reaction is, to say the least, very indirect when much more direct means are available.

If a carbon dioxide recorder is used, how much advance has been made? The per cent carbon dioxide in the flue gas is known all the time. What good is this information without a standard? If it is 8 per cent CO_2, there may be too much excess air and therefore heat losses in sensible heat of flue gases. If it is 15 per cent CO_2, there may not be enough air for complete combustion and therefore heat losses due to unconsumed combustible gases occur. This can perhaps be remedied. Take hand samples for twenty-four hours and by finding the point where the CO_2 was highest and where there was no CO, determine the standard per cent CO_2 for operation. This has taken care of everything but the rate of firing and the grade of coal. Change the coal, the load on the boilers or put a few holes in the fires and all is lost. A complete record of the

per cent carbon dioxide in the flue gas is inadequate for accurate control.

The Matter of Control

How is it going to be controlled? Fortunately there is an instrument on the market, a duplex flue gas recorder, which fulfills all these requirements. It makes continuous analyses and records for both carbon dioxide and carbon monoxide in the flue gas. It has also been perfected to give excellent satisfaction and is being used by the best engineers in the country. We now wish to increase the per cent carbon dioxide in order to decrease the losses by sensible heat and we want to know when we have gone the limit by the appearance of carbon monoxide in the flue gases representing heat losses by unconsumed gases. This instrument will tell the story for coals, fuel oils or gaseous fuels, for any grade of these fuels, any rate of firing, any per cent excess air and any condition of the fire. Its advantage in fuel oil furnaces will be appreciated when it is considered how low the excess air need be as compared to coal combustion and therefore how much more necessary it is to know accurately the loss due to unconsumed combustible at any time. Because it tells variables accurately it determines the optimum point for the most economical combustion conditions.

Equipment That Fulfills Conditions

It is thus seen that equipment that gives a record of both carbon dioxide and carbon monoxide continuously is the only type of equipment that can fulfill all the conditions for accurate combustion control. The answer to the question of their economic value will depend on the possible improvement over present operation. Where present operating data does not exist, the strong statement can be made that it will make an improvement if the information imparted by the record is used as a basis by the boiler house crew. A boiler house test will tell the present conditions and from that the estimated increase in efficiency can be made. This balanced with the return desired on the equipment cost will determine the feasibility of an installation.

A Paying Investment

Let us recall the conservative saving of $7,000-$8,000 made in a 1,000 B. H. P. plant by a decrease in coal costs of 10 per cent. This was based on coal at $5.00 per ton. Proper allowances must be made in the variation from this price in your locality. It is evident that utilization of continuous records of carbon dioxide and carbon monoxide is a paying investment.

NEW GERMAN WORKS ON THE PAPER INDUSTRY

Reviewed by Clarence J. West, Chairman of the Bibliography Committee of the Technical Association of the Pulp and Paper Industry

Waterglass in Paper Sizing

There has recently appeared a reprint of the work of Th. E. Blasweiler's on "Die Verwendung von Wasserglas zum Leimen von Papierstoff," which was originally published in *Der Papierfabrikant* for 1921. The value of the experimental work is assured by the fact that it was carried out under the direction of Prof. Emil Heuser, of the Institute of Cellulose Chemistry, in the Technical High School at Darmstadt. After a brief review of the work on water-glass sizing, Blasweiler studies in turn water glass alone, water glass and rosin, water glass and fatty acids, water glass and animal gelatin, water glass and starch and finally water glass and casein. Nearly 100 experiments are reported in detail and summarized in the form of a table. The results appear to show that economies may be effected by the proper use of water glass as a substitute for a part of the rosin or gelatin size in many papers and as an entire substitute for certain papers. It is claimed that the finished product is stronger, has a better feel, secures a greater retention of the fillers, has a greater absorptive capacity for printers' ink, and that it takes dyes as well or better than ordinary sized paper. These facts, combined with the lower price of water glass, warrants further experimental work with this new process of sizing. The original deserves study by those interested, and may be borrowed from the chairman of the Committee on Bibliography.

The Rational Theory of the Beater

Both before and since Beadle published his "Theory and Practice of Beating" in 1908, the laboratory and the mill have attempted to reach a satisfactory solution of the difficulties which confront the papermaker. One of the recent contributions to the subject is a 192-page monograph by Sigurd Smith on "Die rationelle Theorie des Ganzzeugholländers," originally published in Danish, and later translated into German and published serially in *Der Papierfabrikant*. After reviewing the previous work, the author proceeds to build up his own theory of beating. If one has not forgotten his mathematics, he may be able to follow the theoretical discussion which occupies the first portion of the work. The second part of the book deals very thoroughly with the power problem and is enriched with many experiments, formulas, and curves. The third section covers the action of the knives in smoothing out and refining the fibers. Anyone about to make a theoretical study of the question of beating will need this volume, but we fear that our ordinary mill man will be contented with what he can learn in the association textbooks.

Heat and Power

Still a third reprint from the German magazine *Der Papierfabrikant* is "Die Verwendung von Wärme und Kraft in der Papierindustrie," by Frederik Grewin, technical director of the Holmens Bruks mills in Sweden. In view of the multiplicity of articles now appearing in the trade press on the use and conservation of heat and power, it is evident that the subject cannot be covered at all adequately in 70 pages. This the author recognizes and so he confines himself to a general survey of the results which may be accomplished by the scientific application of certain facts. Those who read German readily will find the work worth reading.

Possibilities for Paper Making in Utah

The average amount of paper used by each man, woman and child in the United States is about fifty pounds per year. On this basis Utah uses annually about 25,000,000 pounds. The forests of Utah contain, according to the United States Department of Agriculture Forest Service, 5,529,600 cords of merchantable aspen.

A part of this is not now accessible, but could be made so in answer to a demand for this timber. This aspen is the same tree which in Maine is called "popple" and which is there used on a large scale for the manufacture of paper pulp. According to this same authority, i. e., the Forest Service, more aspen is used for paper making than any other wood except spruce and hemlock, the annual consumption in the United States being about 350,000 cords.

If Utah were manufacturing paper pulp enough to supply her own paper demand, there would need to be produced here annually, the following amounts of materials; wood, 25,000 cords; coal, 4,375 tons; salt cake, 2,500 tons, and lime about 3,750 tons. The wood from the forests and the salt cake from Great Salt Lake would represent two new industries in the state. With the shortage of paper pulp which has prevailed for some time past, and which shows little sign of abating, the manufacture of paper or paper pulp, from these untouched forests, and with the other raw materials readily available, should be not only feasible, but attractive, says the *Salt Lake Mining Review*.

THE COLORING OF PAPER STOCK*

By Emil Heusen

The first part of this address is taken up with a detailed account of the history and development of processes for the coloring of paper stock from the earliest time that this was attempted. The latest improvements in the process of coloring paper stock, directly in the paper making machine are then discussed. It appears that the well-known German dyestuffs concern, Hoechster Farbwerke, has paid considerable attention to this problem and has developed entirely new and novel methods of marked success for accomplishing the coloring of paper stock.

General Considerations

In the first place it is essential that the behavior of the paper stock itself be taken into consideration, for even the dyes which are most fast to light will not last long if this is not done. It would be quite absurd to attempt to dye a paper stock, containing wood pulp almost entirely, for wood pulp exposed to light, soon turns brown. Likewise, unbleached sulphite cellulose must not be used, when the paper is to be dyed. Unbleached soda pulp behaves much better and bleached cellulose can be used without any hesitation at all. It is scarcely necessary to mention that bleached semi-cellulose, made from cotton and linen rags, is best suited for this purpose.

In order to color paper stock so that it will be fast to light, many substantive dyes may be used, such as cotton yellow, thiazin red, cotton red, paper yellow, various paper fast blues, which give predominately light-fast colors with copper salts and which may be used in the place of Berlin blue, which is not at all fast to alkalies. The copper dyestuffs are unsurpassed for this purpose, particularly the various pigment dyes, developed during the past year. To this class of dyes belong the colors known as the Lithol and Authol fast dyes, some of which possess the fastness of chrome yellow. Another class of dyestuffs, developed likewise for this purpose, is known as the Helio fast dyes.

The pigment dyes, which are counted in the class of the so-called body dyes and which are color lakes, possess great covering power, which is not exhibited by the ordinary coal tar colors. The covering power of these dyes is developed to its maximum degree when the colors are allowed to mix with the stock in the hollander for as long a time as possible. The acid resistant, alkali resisting and fast-to-rubbing properties of these colors, which are important especially in the manufacture of wall paper, are developed to a very marked degree.

In all cases of paper coloring, where fastness to light is not of vital importance, the numerous dyes of the other classes, first the acid and basic dyes and then the substantitive dyes can be used. In general the rules and experienced gained in the dyeing of textile fabrics are followed in the use of these dyes to color paper. It is not advisable to assume that the same treatment can be applied to cotton half-stuff or linen half-stuff and all the other cellulose materials, because they fundamentally consist of one and the same basic substance, cellulose. In the selection of the proper dye, consideration must be taken not only of the nature of the fiber that is being dyed but also of the purpose to which the finished paper is going to be put.

The tannin mordants which are used to fix the basic dyes on cotton need not be used when these dyes are employed to dye paper made from wood pulp. The lignin, contained in the wood pulp, and also in unbleached cellulose materials, replaces these tannin mordants to a certain extent. It is for this reason that the basic dyes are used predominately for this purpose.

As far as the acid dyes are concerned, other agents must be used to aid in fixing them on the cellulose fiber, because of the inability of the dyes themselves to hold fast to the lignin and cellulose fiber. This is quite necessary if it is desirous—and for economical manufacture this must be done—to have as little color in the waste waters as possible. Such an agent is found in the compound formed between rosin size and sulphate of alumina, which apart from this has been used for other purposes in paper manufacture. Bleached raw stock can be colored cheaply and permanently by using the acid colors in combination with rosin size. Furthermore, combinations of acid and basic dyes may be used in order to obtain waste waters, colored as little as possible, for these two classes of dyes exert a reciprocal precipitating action on each other.

The substantive dyes are then used for the more expensive grades of paper, made from bleached raw materials, as they have a considerable affinity for the cellulose fiber, and consequently they can be used without any mordants.

Effect of the Sizing

As far as the influence of the sizing used in the paper on the coal tar dyes is concerned, it has been found that the rosin size acts very favorably in by far the greatest number of cases; the aluminum sulphate size behaves likewise. This, however, is not the case when bisulphate of soda is used as a substitute for the alum size. This size fixes the acid dyes on the fiber in a very loosely held condition and at that only a small part thereof, with the result that the waste liquors are deeply colored with the dyes. A full tone of color is not obtained. The bisulphate also has a bad effect on the coloring of the paper with substantive dyes. Sulphate of alumina is, in truth, one of the most important ingredients in the paper, with respect to its effect on the dyestuffs used in dyeing the same, as not only does it act as a very efficient mordant, but it also has no effect on the tone of the color.

Softness of Water

At the very beginning of the process of dyeing paper, when vegetable colors were first used, it was pointed out that the softness of the water was a very important consideration in the success of the process. While this is not so significant a factor nowadays, nevertheless when the water contains too much solid ingredients, even dyeing with the coal tar dyes is affected adversely thereby. This is especially the case if the water contains relatively large quantities of magnesium chloride. Under these conditions it is possible for the magnesium salt to form an insoluble precipitate with the dyestuffs, especially the acid and substantive dyes. These so-called color lakes are coarsely flocculent and possess dull tones, and are often the cause of the spotty and irregular coloring of the paper. In addition thereto the consumption of the dyestuff is increased all out of proportion. It is self-understandable that the water used in the process should be free as possible from organic matters, humic acids and iron salts.

Effect of the Fillers

In former investigations in the field of coloring of paper stock, practically all the attention was paid to the relation between the color and the fibrous materials used in making the paper. However, inasmuch as a great many different kinds of paper are made with fillers of various sorts it appeared advisable to learn something about the behavior of the colors with these fillers. The author of this paper made a number of basic investigations of this sort a few years ago. The conclusions of these investigations were that of china clay, kaolin, alumina, talc, asbestine and blanc fixe, the filling materials most generally used in paper making,

*Translated and abstracted from an address delivered before the Swedish Society of Paper Chemists in Stockholm in *Der Papierfabrikant*, by Ismar Ginsberg, B.Sc., Chem. Eng.

the acid silicates absorb best the basic and substantive dyes, while on the other only much smaller quantities of the acid dyestuffs. Asbestine behaved best of all in this respect. Neutral barium sulphate of all the filling materials was found to absorb color worst. This applies to all sorts of dyestuffs used for coloring paper.

The coloring of the silicates and of blanc fixe with acid dyestuffs was not fast. The colors can be washed out again with water. On the other hand the coloring of the acid silicates with basic and substantive dyes is permanent.

Inasmuch as the fillers used in the paper making process have the effect of improving the fixation of certain dyestuffs on the paper fiber, practical advantage should be taken of this property. Acid dyestuffs should not be used when the paper is loaded with acid silicates; in this case basic and substantive dyes are much preferred. In choosing between various filling materials on the basis of their action on the coloring matter it is well to remember that blanc fixe should not be used at all if possible. The above rules, however, do not apply to the condition of the paper which is not loaded with fillers.

Ability of Dye to Color Paper and Its Composition

In addition to the particular class to which a dyestuff belongs another property of the coloring matter is of importance in this connection, and that is its composition, particularly the size of the molecules. This is quite important when the behavior of the dye with the filling material is being considered. It appears that only the dyes which possess the most complicated molecular structure with very high molecular weight of the basic and substantive classes will give fast colors with the acid silicates. Various theories have been developed concerning the coloring of the inorganic substratum in the paper, but these will not be discussed further here, as they are quite involved and the experimental data on which they are based are not of sufficient scope to afford any definite conclusion.

Simultaneous Weighting and Coloring of Paper

The author, however, has made a series of investigations with a large number of different filling materials, which have not up to the present time been employed in weighting paper and which were prepared by artificial processes. These substances were the silicates of aluminum, calcium and magnesium; in addition thereto amorphous and colloidal or gelatinous silicic acid, kieselguhr, aluminum hydroxide, etc. The aim of these investigations was of a practical nature entirely. It was desired to develop good fixation of the dyestuff on the paper fiber by the aid of the filling material. This was to be accomplished by carrying out the weighting of the paper and the coloring of the paper fiber within the interior of the paper stock itself. As far as the silicates were concerned this was effected in this manner, that the paper pulp solution was first mixed with the solution of the dyestuff, and then with a solution of water glass, the source of the silicate, and finally with the requisite precipitating agent, such as sulphate of alumina, chloride of calcium, sulphate of magnesium and others.

In this manner the colored silicates of aluminum, calcium and magnesium, likewise the corresponding color lakes were produced right in the paper stock itself. It was found that the aims of the investigation were realized by this procedure and that the combination of the weighting of the paper with the coloring of the same affords certain important advantages.

In the first place the yield of filling material that was obtained by direct precipitation on the fiber was altogether satisfactory. When the density of the paper stuff was only slight, about 1.5 per cent, 42 per cent of the chemical used remained behind in the finished paper as calcium silicate, 45 per cent as magnesium silicate and 65 per cent as aluminum silicate. In respect to the nature of the coloring process it may be assumed that the dyes are precipitated as silicate lakes and are absorbed by the paper fiber in this form. The waste liquor obtained in this process, which shows only a slight coloration, is an indication of the completeness of this absorption. In addition thereto the milky turbidity that results in the paper pulp solution when both color and filling material are added does not occur in this case at all.

It was also found that the silicate lakes were dyed fast in this manner. A test was made by coloring the silicate in a solution by itself in accordance with the above procedure, and it was found that the color could not be washed out. Likewise the color was fast to washing with alcohol, almost as completely as with water. Furthermore the fastness of the color lake to light was increased likewise.

It was also found that the dyeing of the paper stock was improved when in addition to the precautions used above a mineral size was used in sizing the paper. In this case the peculiar properties and the advantages of such a size results in a better coloring of the paper stock. As has been mentioned before the color lakes were prepared by themselves, exterior to the paper stock, and then they were used in pulverized form in the hollander. While this method of dyeing is of value in special cases, nevertheless the former method is by far the more advantageous.

In so far as the effectiveness of different dyes used in this process of coloring paper is concerned it may be mentioned that the acid silicates kieselguhr and amorphous silicic acid behave very well with the basic dyes. On the other hand the acid dyestuffs do not color these filling materials nearly so well. Then again just the opposite results were obtained with aluminum hydroxide. This is colored only slightly by the basic dyestuffs but very effectively by the acid dyestuffs. This merely substantiates the conclusion that was derived and stated above, namely, that the acid silicates absorb the basic dyes best, while the basic filling materials absorb the acid dyes best. The paper weighted with aluminum silicate was found to be colored most deeply of all.

Paper Manufacturers Troubles In Ireland

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., June 28, 1922.—It is interesting to note that at the May meeting of the Dail Eireann in Dublin a history of the recent vicissitudes of the Irish Paper Mills at Clondalkin was given by Joseph McGrath, Minister for Labor. In April the Clondalkin paper mills were closed on account of a strike, resulting from a dispute as to the employment of a man to whom the workers took exception. On April 20, the adjutant of a battalion of the I. R. A. (Irish Republican Army), stationed near Clondalkin, wrote the manager of the mills stating that because of the strike some of the mill men were enlisting with the Free States Army at a point near Clondalkin; consequently, the strike was indirectly operating to the disadvantage of the I. R. A. He ordered the manager of the mills to reopen them, suggesting that a proposed reduction in wages be submitted to arbitration, that all the former workers be employed, and that the man whose conduct had caused the strike be not re-employed until the dispute regarding him had been definitely settled. The manager of the mill quite obviously was not any too much pleased with this order from the I. R. A., and in his reply stated that he did not see his way to obey the order. He pointed out, however, that if the I. R. A. desired to start up the mills itself the company would put no difficulties in its way, provided the proper indemnification for materials, coal, supplies and damage be given by the I. R. A.

Mr. McGrath, Minister for Labor, finally succeeded in getting the men to agree to return to work, but the manager of the mills would not open them, stating that the costs of manufacture in Clondalkin under present conditions were too great. The question of wages and that of re-employing the man that the workers had objected to could be adjudicated, he said, but on account of the state of the country and the way in which the mills had been treated the company had definitely decided to leave them closed.

A DICTIONARY OF PAPER TERMS

(Continued from last week)

Midfeather.

Midrib.

Midriff. The partition down the center of a Hollander type beater or washer which determines the circulation.

Mildew. See Mold.

Milk of Lime. The white liquid produced by the agitation of slaked lime in water: the lime (calcium hydroxide) being slightly soluble is largely held in suspension.

Mill Board. Cardboard made of wood pulp, waste paper or any kind of fiber waste. Best quality for binding is made from old rope.

Millon's Reagent. A solution prepared by heating mercury with its own weight of nitric acid (63 per cent. HNO_3), first cold and then gently warming till solution occurs. Add twice its volume of water, and let stand until sediment subsides. The clear liquid is M's reagent. It gives a white precipitate with protein, which becomes red on boiling. This reagent gives a red color on papers sized with gelatine or casein.

Mineral Blue. Ferric ferrocyanide.

Mineral Green. Carbonate of Copper.

Mineral Oil. See Petroleum.

Mitscherlich Pulp. A sulphite pulp prepared by long cooking at low temperature and pressure. Named after Doctor Mitscherlich, who developed the method.

Minium. See Red Lead.

Moisture. Water absorbed or adhering to substances as distinguished from water as a chemical constituent, or as any major part of a mixture. Water holding substances in suspension is not "moisture."

Moisture Test. The determination of moisture in pulp or paper as shipped. It is assumed as a trade condition that pulp in contact with the air will not dry beyond a stage when it contains 8% to 10% of moisture. Ten per cent is the arbitrarily agreed limit for pulp: hence pulp is sold on a basis of 10% moisture; that is, each 100 pounds of pulp contains 90 pounds of absolutely dry (bone dry) fiber and 10 pounds of water. If a sample of shipped pulp contained 20% moisture and 80% bone dry pulp, its air dry content would be calculated by dividing by 9 and multiplying by 10. $\frac{80}{9} \times 10 = 88.88\%$. It would obviously not be correct to add one tenth of itself to 80, which would give only 88% because the bone dry weight is 9/10 of the whole air dry weight.

Mold. A fungus growth due to infection with spores of certain low species of plant life.

Mold. See Cylinder Mold.

Mold Made. Imitation hand-made paper, sometimes made on a cylinder mold by dividing the surface with rubber bands to simulate the deckle edges of hand-made paper.

Molded. See Mold Made.

Monel Metal. A natural alloy of copper (28%) and nickel (67%), obtained by smelting the native nickel copper ores of Northern Ontario. Named for Ambrose Monel; used as a substitute for nickel and bronze as acid resisting fittings.

Monocotyledon. A plant which produces one seed leaf in sprouting. Bamboo, esparto and corn are monocotyledonous plants.

Mordant. An agent used to fix dyes on fibers. Alum acts as a mordant.

Mother-of-Pearl. An effect on paper obtained by immersing glazed paper in a bath of silver or lead salts, drying, exposing to vapor of hydrogen sulphide, and fixing the irridescent effects with collodion.

Mottled. Paper having a variegated effect, due to the introduction of a small amount of strongly colored fibers to stock of another color.

Mullen Test. The energy in pounds per square inch required to burst a sheet of paper confined on the Mullen machine.

Mundic—Iron Pyrites. See Pyrites.

Muriatic Acid. A common name for hydrochloric acid.

Musa Textilis. See Manila.

Music Paper. Bulky paper made of esparto, straw or poplar pulp with a little sulphite. Cheaper kinds contain mechanical pulp. These are slack sized and machine finished, very little calendering.

N

N Paper. Is inferior to the M grade, specks and wrinkles are common.

Naphtha. A term used for several volatile inflammable liquids. Naphtha proper is obtained from coal tar. Light petroleum liquids like gasolene are often called naphtha.

Naphthalene. An insecticide and moth repellant obtained from coal tar; sometimes added to motor spirits to speed up explosion in the cylinder. Is an intermediate in some important dyestuffs. Sold in balls, flakes and tablets.

Naples Yellow. A pigment—antimonate of lead.

Natron. An European name for sodium carbonate—soda ash.

Nature Browns. Brown wrappings whose color is due to the stock used and not to dyes. Such papers are made from sulphate and soda pulps, jute or mechanical pulp.

Needle. See Cutlery.

Nessler's Reagent. A solution of mercuric iodide in potassium iodide, used for detecting minute amounts of ammonia.

Neutral. Neither acid nor alkaline.

Neutral Alum. Alum to whose solution soda ash or caustic soda has been added. The aluminum hydrate is precipitated more readily from such an alum when used as a mordant.

News. Printing paper made largely from mechanical pulp containing from ten per cent to twenty-five per cent sulphite. Recent indications are that news may be made entirely of mechanical pulp with proper modifications in grinding. News paper is soft sized and machine finished.

New Zealand Flax. A fiber used in ropes, obtained from the leaves of the plant Phormium tenax.

Nigrosine. A group of bluish black coal tar dyes, of which some are soluble in water; some in alcohol or oil.

Nip. The extent of passage of paper through a calendar—one nip is when the sheet is passed between two rolls only.

Niter Cake. An acid sulphate of sodium, a by-product of nitric acid manufacture. Can be used with special precautions in place of salt-cake for sulphate pulp manufacture. Accidents have occurred, due to the liberation of carbon dioxide from carbonates in the black ash or lime, causing suffocation of workmen.

Nitrate of Iron. A reddish iron salt used for producing cream to buff shades in paper.

Nitric Acid. Aqua fortis—acid azotic—HNO_3. Usual strength of concentrated. Specific gravity 1.42, 70 per cent HNO_3. Corrosive poison, Antidotes, weak alkaline solutions, such as baking soda.

Nitro Cellulose. Gun cotton; produced by treating pure cotton with nitric acid in the presence of sulphuric acid. It can be prepared from wood cellulose, but the product is not, for various reasons, as stable as that from cotton.

Nitro Muriatic Acid. Aqua Regia, a mixture of nitric acid, (18 parts), and hydrochloric acid (82 parts).

Non-curling Gummed Paper. Specially prepared gummed paper, the body paper being made as nearly free from stretch as possible, and the coating of gum when dry is broken into fine particles by drawing the finished paper over a steel bar. This prevents the film of gum from acting as a single continuous surface.

Normal Solutions. Solutions used in analytical chemistry; their strength being based on the hydrogen equivalent of their molecular weight per litre.

O

Oakum. Hemp fiber teased out from old rope impregnated with tar or pitch and used for caulking the seams of ships, etc.

Oatmeal Paper. A paper for wall paper or hanging purposes prepared by incorporating fine sawdust with paper made largely from mechanical pulp with a little sulphite. The sawdust is applied when the sheet is being formed. Frequently the sawdust is dyed a different color from that of the paper.

Occlusion. The property of some metals whereby relatively very large volumes of gases can be absorbed by them. Hydrogen is occluded by palladium wire to the extent of 935 times its own volume at red heat, and 376 times at ordinary temperatures. Hydrogen in this condition very readily enters into chemical reactions, acting as a reducing agent.

Ochre. A name given to several natural hydrated oxides of iron, mixed with clay, of shades from cream to dark brown or red. The number of shades is much increased by roasting the oxides at different temperatures and with different conditions—reds and purples with oxidizing conditions and olives and greens with reducing conditions. Burnt umber and sienna belong to this class.

Ochre Glazed. Wrappers of various qualities, colored with ochres and glazed.

Offset. A special paper used for taking lithographers' proofs: must be hard-sized, well beaten and have, as nearly as possible, the same surface on both sides. Good sulphite stock with some ledger clippings can be used. Surface must be free from loose or upstanding fibers.

Ohm. The unit of electric resistance.

Oil of Vitriol. See Sulphuric Acid.

Oiled. Paper used in letter copying books. Prepared by soaking paper in boiled linseed oil or a mixture of oil and turpentine. Sometimes the oil is just brushed over the paper. Should be of strong, long stock. Oiled paper largely used in the packing industry is prepared by saturating heavy manila paper with a neutral mineral oil.

Onion-skin. A light, strong paper, glazed on one or both sides, made from well beaten rags and sulphite, used for manifold or carbon copies.

Opacity. The property of being opaque.

Opaque. Preventing the passage of light. Short fibers and quick beating tend to opacity in paper as well as the presence of mineral fillers or old papers.

Orange Mineral. A pigment prepared by roasting lead carbonate.

Orr's White. See Lithopone.

Osmosis. When two liquids are separated by a porous partition the tendency to penetrate the partition is known as *osmosis.* In some cases the penetration will proceed in both directions. tion of the cell-walls. Osmosis is a factor in the cooking of Osmosis is the principle whereby sap rises in trees by penetrawood pulp.

Out Board.

Out Bored. Bearings. Bearings placed outside a pulley which has to be hung on the otherwise unsupported end of a shaft.

Out of Register. In colored printing or lithographic work, if two or more colors do not fit exactly in their places on the paper, they are said to be out of register. This may be caused by expansion or contraction of paper between printings.

Outs.

Outsides. The sheets on the outsides of packages, usually slightly damaged. Also applied to poor, specky sheets of hand-made paper sold separately.

Outside Reams. Reams containing two quires of retrees: one at the top and one at the bottom. The price of "outsides" is considerably lower than "good."

Overrun. Paper made in excess of an order. The amount of overrun acceptable is limited by trade agreements.

Oxalic Acid. A dibasic acid $C_2H_2O_4$—obtained from wood by fusion with soda and treatment with lime and sulphuric acid. Oxalic acid is poisonous.

Oxford Bible. A special rag paper, strong, opaque, and thin—prepared by careful beating of selected rags.

Oxyacetylene Welding. See Autogenous Weld.

Oxycellulose. A white powdery substance produced by treatment of cellulose with oxidizing agents such as strong bleach.

Oxygen. An element: Symbol O, At. Wt. 16. The active component of our atmosphere (nearly 21 per cent by volume). Water is nearly 89 per cent oxygen by weight.

Ozone. A modification of oxygen, having three atoms of oxygen in its molecule in place of two. It is not very stable, and two molecules of ozone readily break up into three molecules of normal oxygen, or combine with any readily oxidizable matter. This makes ozone a valuable bleaching agent.

P

Padding. A process of coloring paper by application of dyes to the surface, either at the calenders or in a vat part way down the driers.

Paddle. An instrument used to move stock lying in the bottom of the beater to bring it into contact with the roll. It is a straight wooden pole about ten feet long, with a flat end like a paddle about four inches wide.

Pamphlet. Printing paper of a little better quality than news—in several grades and used as the name suggests. Also tinted and used for covers of pamphlets, etc.

Panel Boards. Several compositions are used: from two to six-ply pulp boards to tough thick leather boards—depending on uses.

See Wall Board, Leather Board, Plaster Board.

Paper. Any substance composed of vegetable fibers suitably felted (as distinguished from textile fabrics, which are woven) to form a sheet. Chronology of materials used:

Palm Leaves .....up to B. C. 2000
Bark of Trees .....about B. C. 2000
Papyrus .....as early as B. C. 2400

Parchment and Skins.....about B. C. 200
Rice and Bamboo (Stalks) (in China)..about A. D. 200
Rags known in China.....before A. D. 700
Rags brought to Europe by Moors.....A. D. 1000
Cotton Paper known in England .....A. D. 1300
First Mill in England, Tate's.....A. D. 1498
Spielman's Mill built at Dartford.....A. D. 1588
Whatman's Mill built at Maidstone.....A. D. 1760
Robert's Machine invented .....A. D. 1799
Fourdrinier's improvement in operation.....A. D. 1804
Straw used .....A. D. 1851
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   b. Wire, Breast-roll and Table-rolls, Guide rolls.
   c. Deckle Straps and Pulleys, Suction Boxes and Dandy.
   d. Couch Rolls or Suction Couch.
2. Presses. a. One or more with their accompanying wool felts and felt rolls.
3. Driers. a. With top and bottom drier felts in one or more sections of cotton.
4. Winder End. a. With calender, reels and winder.
   (Sometimes, especially in writing paper machines, there is provision in the drier section for top sizing by passing the sheet when practically dry through a sizing bath between rolls and back onto the remainder of the driers.)

With little change of principle, the machine used today is practically that first successfully used by Fourdrinier—changes have affected size and speed chiefly.

Paper Mulberry. A tree found in Japan, the inner bark of which is used for papermaking.

Paper Sizes. See Sizes of Paper.

Paper Varnish. A special thin varnish used to render paper labels waterproof and give a glossy appearance. Bookbinders use a varnish made by dissolving three parts of gum mastic in methanol, and adding one part bleached shellac. Ordinary paper varnish is:

Gum Sandarach, 5 parts.
Venice Turpentine, 3 parts dissolved in methanol.

Papier Maché. Waste papers pulped, mixed with clay and rosin, pressed into molds, or stamped with dies to form trays, plates, etc.; often given a high surface with varnishes.

Papyrine. An imitation or vegetable parchment prepared by dipping unsized paper for thirty seconds in strong sulphuric acid, afterward neutralizing by dipping into ammonia water.

Papyrus. A reed-like plant grown in Egypt, and used by the ancients as the source of a form of paper, which was made from the stem by beating, thus separating the fibrous layers, pasting them at irregular angles to form a sheet.

Paraffin. (1) Properly any of the members of a series of compounds differeing from each other by CH_2—having a general formula C_nH_{2m+2}.

So called because of great stability of these compounds.

(2) Paper which has been treated with paraffin wax to render it waterproof.

Paranitraniline Red. A red produced or developed on fibers by treatment first with betanaphthol, drying, and then developing in a solution of diazotized paranitraniline.

Parchment. (1) Skins of sheep, goats, etc., prepared for writing, before the advent of paper.

(2) Paper prepared in various ways to imitate parchment. Long beaten rags make the best grades, but wood pulp may be used. There is no filler.—Imitation Parchment.

(3) Paper, unsized, dipped into sulphuric acid for a short time and the acid subsequently washed out by water. This must be thorough.—Vegetable Parchment.

Pasteboard. Board covered by lightweight pastings.

Pastings. Papers of various qualities and light weights used to cover middles or to line boxes. Frequently it is colored, often glazed after pasting.

Pattern Papers. Strong natural colored tissues, well-felted and calendered, chiefly sulphite, with or without a little rosin size—used for dress patterns.

Pawl. A small piece of metal having a hole at one end through which a pin runs. It is free to move on the pin, and its free end, which is pointed, engages the teeth of a ratchet wheel to prevent back motion as on clock springs.

See Ratchet.

Pearl Filler.

Pearl Hardening. See Calcium Sulphate.

Peat. Vegetable matter, partially decayed, found in bogs in numerous localities, used as a fuel after drying. Frequently suggested as a source of papermaking material. Only very inferior grades of little strength can be made.

Pecto Cellulose. A compound cellulose.

Pentosans. Derivatives of Pentoses.

Pentoses. Sugars containing five atoms of carbon, derived from furfural-yielding hydrocarbons, mainly located in the permanent woody tissues. They are converted into pentosans by oxidation of carbon in the plant.

Perfect Paper. Printer's term for a full ream of 516 sheets.

Perfect Pulper. A conical cased machine with its axle horizontal, fitted interiorally with steel protrusions between which the revolving blades of its axial shaft run. Used for old papers.

Perfecting Engine. Apparatus similar to the Jordan refining engine.

Peripheral—Speed or Velocity. The speed in feet per minute on the circumference of a rotating member.

Permanganate. A salt either of sodium or potassium containing much combined oxygen, which is readily exchanged with the easily oxidizable constituents of wood; therefore acts as bleaching agent.

Petroleum. A mixture of various oils of the paraffin series, found in nature in many localities. It is the source of the largest proportion of lubricating and fuel oils and gasoline.

Phenol. The chemical name for Carbolic Acid.

Phenolphthalein. An indicator, used in volumetric analysis. When a drop of its solution is added to an alkaline solution the solution becomes a rose-pink. Acid or neutral solutions are uncolored. It is not soluble in water—usually it is dissolved in alcohol, and the solution diluted with its own volume of water.

Phloroglucin (phloroglucinol). A compound used for detecting lignified fibers in paper. The solution is made by dissolving 2 grams in 50 cc. of alcohol, and adding 25 cc. hydrochloric acid—ground wood shows up pink to rosy red, depending on proportion in paper being examined. Certain dyes, such as metanil yellow give a red reaction with the hydrochloric acid, so conclusions must not be rashly made. See Aniline Sulphate.

Phormium Tenax. See New Zealand Flax.

Phosphor Bronze. A bronze containing up to one per cent of phosphorus. Copper, zinc and tin are other components.

Photochemical Effects. Effects produced by the action of light, for example fading of color in paper.

Photographic Paper. Specially prepared paper, free from impurities which would affect the sensitive fibers spread upon them. It is gelatine sized and strong enough to withstand handling when soaked with the developing and fixing solutions. Well bleached and well washed rag is the best stock.

Photomicrograph. A photograph of objects as viewed under a miscroscope, such as fibers, fillers, etc., highly magnified.

Picea. A genus of Coniferæ including spruce. See Spruce.

Picking. A defect in coated paper, resulting from insufficient adhesive in the coating mixture—sometimes called "lifting."

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Pigments. The finely ground colored mineral or organic material insoluble in water, used for coloring paper before the use of soluble dyes. The coloring value is much less than that of the coal-tar dyes,

They frequently produce sheets more highly colored on the wire side, due to the action of the suction of boxes and their own high specific gravity.

Pikepole. A long pole with a soft steel point and hook at the end. The hook is usually straight and at right angles or a little less to the pole. Used in handling logs in water.

Pinched Post. See Sizes of Paper.

Pine. Several kinds of pine are found in North America. All can be used for paper pulp. White pine is the best, but commands a better market as lumber. Jack pine, Prince's pine, loblolly pine, lodgepole pine, and the southern or long-leaved pine have all been successfully pulped by the different processes experimentally with a little special attention. The long-leaved pine gives best results by the sulphate process, owing to its resinous character.

Pinhole. A defect in paper caused by fine particles of sand or other hard material. When paper containing such particles is calendered they are crushed and, falling out, leave a hole. If not crushed, they penetrate the fiber and leave holes. Very hard particles may be imbedded in the steel calender-rolls and make a pinhole at each revolution of the roll.

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Plating. Imparting a glossy surface to paper by pressure between copper sheets.

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Pneumatic. Having to do with forces exerted by the air, either under compression or extension as in vacuum pumps.

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Pocher, Potcher or Poacher. Used in Europe. Often synonymous with beater; originally restricted to a beater used for breaking paper-stock and termed a "breaker." In old practice, rags were stirred with a poching (potching) stick.

Polysaccharides, or Polysaccharoses. Carbohydrates of the general formula $(C_6 H_{10} O_5)_2$—such as starch, cellulose, inulin, dextrine, etc. Their molecular weight is unknown and probably quite high.

Pond. The reserve of stock between the slices and the flow-box on the wire of the fourdinier.

Ponolith. See Lithopone.

Pony Roll. A small dryer cylinder which receives the sheet from the last press before it passes to the large dryer cylinders, Also known as "receiving or baby dryer."

Poplar. A broad leaved tree of the genus Populus: also called aspen, balm of Gilead, cottonwood. It is a source of excellent, though short-fibered pulp, usually prepared by the soda process. It acts as a filler—increasing opacity and bulking up the sheet. It constitutes a large proportion of book and magazine paper in Canada and the United States, taking the place of esparto in European practice.

Porion Evaporator. A brick chamber into which the black liquors from soda pulp process run, usually after vacuum evaporation to some extent. Shafts run through the chamber carrying paddles or discs partially submerged. Upon revolving the paddles the liquor is thrown up to the top of the chamber. Hot gases from the rotary burners pass over the surface, carrying off the vapors and condensing the liquors.

Post. See Sizes of Paper.

Post. A pile of handmade paper in wet condition, separated by felts.

Posters. Printing papers, usually in a variety of colors used for advertising—must be strong and well-sized to stand paste, and to some extent weathering.

Pottery. (1) Thin well-glazed tissues for wrapping pottery. (2) Special tissues for transferring designs to pottery.

Precipitate. When the addition of one solution to another, or a gas or solid to a solution, causes the formation of insoluble matter, rendering the liquid murky or opaque, a precipitate is said to have been formed. For example, when a solution of calcium chloride is mixed with a solution of sodium sulphate, the reaction will result in the formation of sodium chloride and calcium sulphate—the latter substance being only slightly soluble in water will appear as a white precipitate.

Precipitated Chalk. Calcium carbonate thrown out of solution, as when soda is added to milk of lime.

Press. See Paper Machine.

Press-Board. Glazed board used to remove the indentations of type by pressing printed paper between them.

Press Pâte. An apparatus for pressing wet pulp into sheets. Wet machine.

Press Rolls. Heavy rolls used to remove water from paper between the wire and the driers. They may be of wood, steel, brass or granite, or be covered with rubber. Pressure is applied by levers.

Pressure of Atmosphere. This is approximately fifteen pounds per square inch—the pressure of a column of mercury 760 mm. high at the sea level.

Priming. Formation of foam in steam boilers or vacuum evaporators.

Printer's Ream. 21½ quires of 25 sheets, or 516 sheets.

Printings. Term for papers used by printers; nearly all grades of mixtures of mechanical pulp, sulphite and soda; not as well sized as writings and inferior in quality of stock. Should be strong, however, and stand handling.

(*To be continued*)

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Ponolith. See Lithopone.

Pony Roll. A small dryer cylinder which receives the sheet from the last press before it passes to the large dryer cylinders, Also known as "receiving or baby dryer."

Poplar. A broad leaved tree of the genus Populus: also called aspen, balm of Gilead, cottonwood. It is a source of excellent, though short-fibered pulp, usually prepared by the soda process. It acts as a filler—increasing opacity and bulking up the sheet. It constitutes a large proportion of book and magazine paper in Canada and the United States, taking the place of esparto in European practice.

Porion Evaporator. A brick chamber into which the black liquors from soda pulp process run, usually after vacuum evaporation to some extent. Shafts run through the chamber carrying paddles or discs partially submerged. Upon revolving the paddles the liquor is thrown up to the top of the chamber. Hot gases from the rotary burners pass over the surface, carrying off the vapors and condensing the liquors.

Post. See Sizes of Paper.

Post. A pile of handmade paper in wet condition, separated by felts.

Posters. Printing papers, usually in a variety of colors used for advertising—must be strong and well-sized to stand paste, and to some extent weathering.

Pottery. (1) Thin well-glazed tissues for wrapping pottery. (2) Special tissues for transferring designs to pottery.

Precipitate. When the addition of one solution to another, or a gas or solid to a solution, causes the formation of insoluble matter, rendering the liquid murky or opaque, a precipitate is said to have been formed. For example, when a solution of calcium chloride is mixed with a solution of sodium sulphate, the reaction will result in the formation of sodium chloride and calcium sulphate—the latter substance being only slightly soluble in water will appear as a white precipitate.

Precipitated Chalk. Calcium carbonate thrown out of solution, as when soda is added to milk of lime.

Press. See Paper Machine.

Press-Board. Glazed board used to remove the indentations of type by pressing printed paper between them.

Press Pâte. An apparatus for pressing wet pulp into sheets. Wet machine.

Press Rolls. Heavy rolls used to remove water from paper between the wire and the driers. They may be of wood, steel, brass or granite, or be covered with rubber. Pressure is applied by levers.

Pressure of Atmosphere. This is approximately fifteen pounds per square inch—the pressure of a column of mercury 760 mm. high at the sea level.

Priming. Formation of foam in steam boilers or vacuum evaporators.

Printer's Ream. 21½ quires of 25 sheets, or 516 sheets.

Printings. Term for papers used by printers; nearly all grades of mixtures of mechanical pulp, sulphite and soda; not as well sized as writings and inferior in quality of stock. Should be strong, however, and stand handling.

(To be continued)

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

The Cellulose Content of Pine Wood.—Peter Klason. *Zellstoff-chemische Abhandlungen*, i, No. 5, 105-114 (1921); *Chem. Abs.*, xv, 2722 (Aug. 20, 1921).—Cross and Bevan's method cannot be used for the determination of the cellulose content of pine wood. Klason has investigated the action of bisulphite (80 g. of sodium bisulphite and 500 cc. of normal hydrochloric acid made up to 1 liter) for varying periods of time at 100°. After 8 days the cellulose reaches a nearly constant value, and, with continued heating, only slowly decreases (1.7 per cent in 3 days). He finds 53 per cent of cellulose in pine wood. The composition of woods of various ages is also investigated.—A. P.-C.

Preparatory Work on Forest Investigations Regarding Determination of Resin, Cellulose, and Specific Gravity.—H. E. Wahlberg. *Svensk Pappers-Tid.*, xxiv, 108-112 (1921); *Chem. Abs.*, xv, 1991 (June 20, 1921).—The paper pulp office has undertaken an elaborate investigation of different woods with regard to their suitability for paper making, viz., the determination of (1) relation between green and dry weight and the volume, also the bark volume, (2) cellulose content, (3) maximum length of fiber, (4) fat and resin content, (5) water-soluble sugars, (6) pentoses, and (7) lignin content.—A. P.-C.

Lignin and Lignin Reactions, II.—Peter Klason. *Ber.*, liii (B), 1862-1863 (1920); *Chem. Abs.*, xv, 859-860 (March 20, 1921).—By the sulphite process all of the lignin can be extracted from the wood of the Scotch pine, birch, beech, oak, linden, aspen, alder, and sallow, and from the solutions can be obtained yellow cyclic beta-naphthylamine salts of practically the same appearance and by the same methods as from pine. The nitrogen and sulphur contents of these salts are about the same (nitrogen 1.82-2.40 per cent, sulphur 4.84-5.43 per cent), and while the lignin in all these different woods are certainly not identical it can be concluded that all have a structure of the same type. The lignin in herbaceous plants can also be dissolved out by the sulphite process and the solutions likewise yield yellow cyclic aryl-ammonium salts, but they have a materially different composition, as will be described in detail later on.—A. P.-C.

Constitution of the Lignin of Pine Wood.—Peter Klason, Forstakademie, Stockholm. *Ber.*, liii (B), 1864-1873 (1920); *Chem. Abs.*, xv, 860 (March 20, 1921). (Compare this journal, lxxii, No. 12, p. 50, March 17, 1921.)—That part of the lignin which contains an acrolein group and whose lignosulphonic acid gives cyclic arylammonium salts is designated acrolein-lignin or alpha-lignin; it is identical with the calcium lignosulphonate precipitated by calcium chloride. There is also another lignin in wood whose calcium sulphonate is not precipitated by calcium chloride, gives no cyclic ammonium salt, but contains a COOH group; this is called carboxyl-lignin or beta-lignin. The coniferyl alcohol, in which form the acrolein complex is present in alpha-lignin, represents only about half the alpha-lignin molecule. The results of qualitative and quantitative experiments are described from which is deduced a formula for alpha-lignin. The composition of beta-lignin can be calculated to correspond to $C_{20}H_{18}O_9$. In the wood the COOH group of the beta-lignin is not free, but is undoubtedly combined with carbohydrates. As the simpler carbohydrates, the pentosans, can in great part, even if with difficulty, be extracted from the wood with water alone, this lignin must, for the most part at least, be combined with the cellulose. Presumably that is also the case with the alpha-lignin. In the complete extraction of the lignin from 1 kilo of pine wood 79.1 g. of sulphur dioxide and 34.6 g. of lime should combine with the lignin. The results of tests in the industry show that in a hard boiled mass about 76 g. sulphur dioxide and 32 g. of lime are taken up.—A. P.-C.

Lignin Determination in Lignified Fibers.—P. Waentig and E. Kerenyi. *Zellstoffchem. Abhandl.*, i, No. 3, 65-71 (1920); *Chem. Abs.*, xv, 435 (Feb. 10, 1921).—The approximate determination of lignin may be carried out as follows: A weighed, thoroughly moistened sample in a tared chlorination flask is treated for 5-6 hours with a slow stream of chlorine. The excess of chlorine is removed by a slow stream of dry air and the apparatus again weighed. The increase in weight in per cent is the chlorine number. This divided by 140 (the average chlorine number of lignin) and multiplied by 100 gives the approximate lignin content of the raw material.—A. P.-C.

Isolation of Carbohydrates and Determination of Lignin by Means of Chlorine Dioxide.—E. Schmidt and E. Graumann. *Ber.*, liv, 1860-1873 (1921); *J. Soc. Chem. Ind.*, xl, 764A (Nov. 15, 1921).—Unchanged carbohydrates, completely free from incrustations, can be prepared readily from portions of plants by the use of aqueous solutions of chlorine dioxide which have no effect on cellulose, mercerized cellulose, oxycellulose, mannan, xylan, starch, and fungus cellulose. The stability of the carbohydrates towards chlorine dioxide is confirmed further by the observation that their components dextrose, mannose, galactose, levulose, xylose, arabinose, maltose, and glucosamine hydrochloride do not react with solutions of the gas. The presence of small amounts of incrustation is detected readily by the consumption of chlorine dioxide, and it is thus easily possible to estimate quantitatively the percentage of tissue substance and incrustation in portions of plants. In this manner pine wood (Pinus sylvestris) is found to contain 63.28 per cent of tissue and 36.72 per cent of lignin, whereas Willstätter and Zechmeister found only 27.35 of the latter. The consumption of chlorine dioxide is small, amounting in the case of pine to 13.50 per cent of the weight of the wood.—A. P.-C.

The Cellulose Content of Spruce Wood.—Peter Klason. *Svensk Pappers Tid.*, xxiv, 7 (1921); *Chem. Abs.*, xv, 1991 (June 20, 1921).—Klason had previously announced the composition of spruce wood as cellulose 53 per cent, other carbohydrates 13 per cent, lignin 29 per cent, and other substances 5 per cent. From elaborate investigations which he intends to continue he now announces the composition of spruce wood as: cellulose free from pentosans 53 per cent, hemicellulose 15 per cent, lignin 30 per cent, and other substances 2 per cent. Four days' digestion does not give clean cellulose. Most digestions ran 10 to 20 days.—A. P.-C.

Cellulose and Lignin.—P. Karrer and F. Widmer. *Helv. Chim. Acta*, iv, 700-702 (1921); *J. Soc. Chem. Ind.*, xl, 764A (Nov. 15, 1921).—By the action of acetyl bromide on cellulose in the presence of acetic acid, acetobromocellulose and acetobromoglucose are formed, but in proportions far from quantitative. In this respect cellulose differs from starch, which is quantitatively converted into acetobromomaltose. The reaction permits no decision as to whether cellulose is a polymeric anhydro-sugar or has a chain structure, since the conditions necessary are too drastic. Wood, straw, and similar materials are completely dissolved by acetyl bromide, and the solutions when treated with ice furnish a mixture of decomposition products of lignin and cellulose. This supports the view that lignin and cellulose are not chemically combined in the wood.—A. P.-C.

Studies on the African "Da" Hemp (Hibiscus Cannabinus): Its Value for Paper Making.—F. Heim, L. Matrod and F. Moreau. *Bull. Office Coloniale*, xii, 247-258, 321-341 (1919); *Chem. Abs.*, xv, 2723 (Aug. 20, 1921).—This plant yields a seed containing 17 to 20 per cent of an oil suitable for food and soap making. It has a fiber excellent for cording and sacking, and the fiber yields 55 per cent of a fine grade of paper pulp.—A. P.-C.

Palmyra Palm Leaves.—F. Heim, J. Maheu, and L. Matrod. *Bull. de l'Agence Générale des Colonies,* xiii, 801 (1920); *Chem. Abs.,* xv, 1993 (June 20, 1921).—The leaf blades of *Berassus flabelifer* yielded 5.34 per cent ash, 52.5 per cent cellulose, 41.6 per cent lignin and small quantities of wax-like substances. On digestion with caustic soda under pressure it yielded 28.3 per cent of a brown colored pulp which was difficult to bleach. The leaf stalk yielded 1.75 per cent ash, 0.87 per cent fats and waxes, 53.6 per cent cellulose, and 41.6 per cent lignin. Digestion with caustic soda yielded 29 per cent of a pulp which could be satisfactorily used for paper making.—A. P.-C.

"Falasco" in the Paper Industry.—G. L. Pavarino and G. Castellari. *Staz. Sper. Agrar. Ital.,* liii, 32-46 (1920); *Chem. Abs.,* xv, 1808 (June 10, 1921).—Falasco is a local name given to certain swamp vegetation consisting mostly of *Phragmites communis,* various species of *Carex, Scirpus, Cyperus, Typha* and *Juncus, Schoenus mariscus, Sparganium ramosum, Gliceria aquatica* and *Sagittario sagittaefolio. Carex* was not sensibly bleached by several hours' treatment with sulphur dioxide. After being bleached with potassium permanganate it yielded 31.5 per cent of cellulose. Falasco is considered a suitable material for paper making.—A. P.-C.

The Effect of Bleaching on the Amount of Alpha-Cellulose in Sulphite Pulp.—E. Wahlberg.—*Svensk Pappers-Tid.,* xxiv, 92 (1921); *Chem. Abs.,* xv, 1991 (June, 1921).—Unbleached sulphite pulp consists usually of 83 to 85 per cent of alpha-cellulose, 7 to 9 per cent of beta-cellulose, and 6 to 9 per cent gamma-cellulose. Digesting with 2 per cent caustic soda solution for 5 hours under 5 atmospheres' pressure yields a cellulose consisting of about 94 per cent alpha-cellulose, 3 per cent beta-cellulose and 3 per cent gamma-cellulose. Eight determinations on 2 samples of unbleached sulphite pulp showed that acetic acid increases the percentage of beta-cellulose, that varying the temperature does not appreciably change the ratio of the different celluloses and that very careful bleaching is necessary for a high percentage of alpha-cellulose.—A. P.-C.

Analysis of Pulp for Moisture for England.—A. Forseller. *Svensk Pappers-Tid.,* xxiii, 460-462 (1920); *Chem. Abs.,* xv, 1992 (June 20, 1921).—Forseller was sent to England to investigate the cause of so many claims regarding moisture content of pulp imported from Sweden and Finland. He found that though the contracts called for the "wedge system" of sampling described by Sindall and Bacon, in practice the sampling was far from correct. The pulp had not been protected from rain during transit, and after arrival was stored some indoors and some outdoors. Forseller recommends protection of pulp from water during storage and transportation, even drying out of moisture, consultation between the technicians of various plants, standardization of sampling methods, taking of samples by a neutral person and frequent testing of balances and weights.—A. P.-C.

Analysis of Pulp for Moisture in England.—*Svensk Pappers-Tid.,* xxiii, 489 (1920); *Chem. Abs.,* xv, 1992 (June 20, 1921).—The author points out that pressing all bales to the same thickness eliminated most of the claims from one plant. (Compare preceding abstract.)—A. P.-C.

The Chemical Composition and Purification of Wood Cellulose.—C. G. Schwalbe *Svensk Pappers-Tid.,* xxiii, 269 (1920); *Chem. Abs.,* xv, 170 (Jan. 10, 1921).—In the attempt to make a cellulose from wood to replace cotton and linen fiber it was found that wood cellulose still held incrustants from the wood itself, together with some decomposition products of cellulose. These crusts contained lignin, sugars, and in cellulose from pine wood resinous substances. No exact determination of lignin substances is known, though light is thrown on it by the deepening color caused by sulphur acids and by a study of the methyl number. The sugars may be divided into pentosans and hexosans. The former can be determined by the furfural distillation method. There is no satisfactory method for the latter.—A. P.-C.

Determination of Available Lime in Quicklime and Hydrated Lime.—Alice I. Whitson. *Chem. Met. Eng.,* xxv, 740 (Oct. 19, 1921).—The following modified Scaife method has been investigated by the Bureau of Standards. Place 1.4 g. of the carefully prepared and finely ground (passing through 100 mesh) lime in a 400 cc. beaker, add 200 cc. of hot water, cover, heat carefully, and then boil for three minutes. Cool, wash down cover, add two drops of phenolphthalein and titrate with normal hydrochloric acid, adding the acid dropwise as rapidly as possible and stirring vigorously to avoid local excess of acid. When the pink color disappears in streaks retard the rate of addition somewhat, but continue until the pink color disappears entirely and does not reappear for 1 or 2 seconds. Note the reading and disregard the return of color. Repeat the experiment, substituting for the 400 cc. beaker a 1 liter graduated flask carrying a one-hole stopper fitted with a short glass tube drawn out to a point. Cool and add dropwise and with vigorous stirring 5 cc. less acid than before. Call the number of cc. used *A*. Grind up any small lumps with a glass rod flattened at one end, dilute to the mark with freshly boiled distilled water, close the flask with a solid stopper, mix thoroughly for 4 or 5 minutes, and let stand half an hour. Pipette a 200 cc. portion, add phenolphthalein, and titrate slowly with half-normal hydrochloric acid until the solution remains colorless on standing one minute. Call this additional number of cc *B*. The percentage of available lime is $2A + 5B$. The method has given results very close to those obtained by calculation from complete analyses of high-calcium and high-magnesium quick and hydrated limes.—A. P.-C.

Hydrolysis of Cellulose.—Y. Kauko. *Naturwissensch.,* ix., 237-238 (1921); *J. Soc. Chem. Ind.,* xl, 765A (Nov. 15, 1921).—Saturation of moist cellulose with gaseous hydrogen chloride in the cold yields a thick solution which remains almost colorless on standing for 40 hours, after which period its reducing power corresponds to about 40 to 60 per cent of the theoretical yield of sugar. According to the duration of the treatment other substances are also formed which produce dextrose on heating in an autoclave. At 13 degrees C. a 90 per cent yield of sugar can be obtained in 4 hours, but above this temperature dark decomposition products are formed. It is probable that cellulose forms additional products with hydrochloric acid. The treatment described could be applied for the determination of cellulose.—A. P.-C.

X-Ray Spectroscopic Investigations on Cellulose.—R. O. Herzog and Willi Jancke. *Z. Physik.,* iii, 196-198 (1920); *Chem. Abs.,* xv, 983 (April 10, 1921).—The authors show that cellulose has a definite crystal structure when examined by the X-ray method developed by Hull and Debye and Scherrer. The cellulose has the same structure, which is rhombohedral, when obtained from different materials.—A. P.-C.

Non-Rusting Metals for Paper Manufacturers.—*Svensk Pappers-Tid.,* xxiii, 192 (1920); *Chem. Abs.,* xv, 172 (Jan. 10, 1921).—Probably no industry that uses iron and steel is so troubled with rusting and erosion as the paper industry. Iron rust and iron salts cause the greatest damage in paper making. The substitution of aluminum sulphate (papermakers' alum) for mineral alum has increased the trouble. The different kinds of acid resisting irons and non-rusting steels are compared and paper manufacturers are urged to substitute these for the more expensive non-ferrous metals now used in paper machinery.—A. P.-C.

Manufacture of Ethyl Alcohol from Wood Waste.—E. C. Sherrard, U. S. Forest Service, Madison, Wis. *Chem. Age (N. Y.),* xxix, 76-79 (1921); *Chem. Abs.,* xv, 1372 (May 10, 1921).—Sawdust and other mill waste from soft woods may profitably be converted into ethyl alcohol where the supply of waste is uniform and constant for a period of 20 years or more, and where there is a good supply of water and a fairly close source of sulphuric acid and lime. Assuming a yield of 20 gallons of ethyl alcohol per ton of wood, as obtained by two plants in operation, the cost of 95 per cent alcohol in a plant of 3600 gallons daily capacity is estimated

at $0.247 per gallon. Complete figures are given based on continuous operation using 180 tons of dry wood per day. A minimum production of 1500 gallons is necessary for successful operation. The process consists in the digestion of the shredded waste with dilute sulphuric acid at 115 to 120 pounds, converting 20 to 25 per cent of the dry wood into sugars, leaching out, neutralizing with milk of lime, fermenting 96 hours, and distilling with standard equipment. —A. P.-C.

Incrustations in Heaters and Evaporators in the Evaporation of Sulphite Liquors.—R. W. Strehlenert. *Svensk Pappers-Tid.*, xxiii, 190 (1920); *Chem. Abs.*, xv, 172 (Jan. 10, 1921).—Sulphite liquor is one of the hardest liquids to evaporate because of the calcium salts deposited. Attempts to prevent the deposit of precipitated salts by rapid circulation of the liquid failed. The production of insoluble substances in the scale seems to be due to the chemical reaction taking place in the liquor during heating. Prevention of such reactions may prevent formation of scale. The incrustation from sulphite liquors consists mainly of calcium sulphate and sulphide; smaller amounts of calcium sulphite, silica, and organic substances are present. The first named is probably due to the oxidation of the sulphurous acid. It is therefore better to use neutralized liquor. Sodium bicarbonate has been used successfully, for the resulting salts are soluble. If the liquor containers are kept full or the walls above the liquor are kept moist, there is less scale. Passing an electric current through the container was studied with promising results.—A. P.-C.

Evaporation of Sulphite Waste Liquor.—H. Bergstroem. *Papir-Journalen*, viii, 34 (1920); *Chem. Abs.*, xv, 1993 (June 20, 1921).—The compression method when using electric energy instead of coal for evaporation of sulphite waste liquor not only saves fuel but also construction and operation costs; it also yields acetic acid and undecomposed organic compounds.—A. P.-C.

List of Abbreviated and Full Titles and of Addresses of the Journals from Which Abstracts Have Been Prepared for This Issue.

Ber. .....Berichte der deutschen chemischen Gesellschaft. F. Oppenheim, Lohmühlenstr. 67, Berlin, S. O. 36, Germany.

Chem. Abs.....Chemical Abstracts. Charles L. Parsons, 1709 G street, N. W., Washington, D. C.

Chem. Age (N. Y).....Chemical Age (New York). McCready Publishing Co., 118 East Twenty-eighth street, New York City.

Chem. Met. Eng.....Chemical and Metallurgical Engineering. McGraw-Hill Co., Inc., Tenth avenue at Thirty-sixth street, New York City.

Helv. Chim. Acta.....Helvetica Chimica Acta. Georg & Co., 10 Friestr., Basel, Corraterie 10, Geneve, Switzerland.

J. Soc. Chem. Ind.....Journal of the Society of Chemical Industry. Central House, 46 and 47 Finsbury Square, London, E. C. 2, England.

Papir-Journalen .....Papir-Journalen. Papierindustriens Hus, Huitf. gt. 1, Kristiania, Norway.

Svensk Pappers-Tid.....Svensk Pappers-Tidning. Svenska Pappersbruksföreningen, Hovslagaregatan 3, Stockholm, Sweden.

Zellstoffchem. Abhandl....Zelstoffchemische Abhandlungen. Verlag von Carl Hofmann, Papierhaus, Dessauer Str. 2, Berlin, S. W. 11, Germany.

Z. Physik.....Zeitschrift für Physik. Friedr. Vieweg & Sohn, Braunschweig, Germany.

WOOD—CORD VS. WEIGHT

B. T. McBain, Nekoosa-Edwards Paper Co., Port Edwards, Wis.

There are many customs still in vogue in the manufacture of paper which to me are as barbarous almost as the eating of human flesh by the cannibal tribes of the South Seas. This is putting it pretty strong, I'll admit, but it must be put in that shape to attract attention. When the attention of the up-to-date manufacturer in other respects is secured, it is easier to drive home the truths of any gospel.

My gospel is efficiency. What is efficiency? Nothing but the application of common sense principles. We are all agreed in this definition, though I believe more sins are committed under the name of efficiency than under the head of murder.

Do any of us purchase aniline dye by measurement? This is only a very small part of the cost of paper to the average manufacturer.

Do any of us buy alum, rosin, soda ash, lime, dolomite, clay, or any other of the minor items used in the manufacture of paper, by measurement? You answer, "No, of course not, for there is no other way known than to buy by weight."

Do any of us buy ground wood, sulphate or sulphite pulps, old papers, cotton linter pulps, or in fact any kind of raw material by measurement, except possibly for the space used in a ship as a basis for freight payment? We can go back to the machinery we all use in the mills. We even paid the freight on that on a weight basis.

Nevertheless, we have gone along all these years buying wood without any known basis for arriving at the item "for value received," which most of us have been signing the past few years when we get the money from Mr. Banker to satisfy the demands of the wood contractor.

How many of us get "for value received" when we turn the bank's money over to the wood merchant?

Some mills are now buying wood on the basis of weight, having arrived at a certain weight as an average cord instead of using the proverbial 4 x 4 x 8, and while this weight may be 4,000 lb. in the case of dry wood "carefully piled," and 5,000 lb. in the case of wet wood, an average or arbitrary weight is used which, while I believe is a step in the right direction, is still subject to almost as great error as the old method, particularly if the wood arrives with the bark on.

Others are now weighing a shipload of wood and measuring the first 50 tons, buying on a cord basis at the average weight of the number of cords which make up this pile of 50 tons. This, too, is a step along the line of progress. But why not get together, gentlemen, and get down to common sense, and if common sense is efficiency, then get down to efficiency methods as we try to do in everything else in connection with our business and insist upon buying only by weight that which we sell only by weight in its manufactured form.

This is no new gospel. It has been brought up before and its apostles are still many, but until all can be converted it will be somewhat difficult to put it over on the wood seller who knows nothing but cord measurement and the scientific piling of as few sticks as possible to make 128 cu. ft. and get by with it.

Southwest Pulp & Paper Co. Incorporates

Monroe, La., June 27, 1922.—The Southwest Pulp and Paper Company, of Norwich, Conn., and Monroe, has been chartered under the laws of Delaware and will take steps at once to construct a million dollar pulp and paper mill on a 20-acre site purchased some time ago south of Monroe by Joseph G. Mayo, of Norwick, Conn., representing the company. The company has asked for bids for the construction of the plant and will award the contract within the next few weeks.

The officers for the new enterprise are: President and manager director, Joseph G. Mayo, of Norwich; secretary and treasurer, M. J. Leahy of New York city. Mr. Mayo was formerly general manager of the Southern Paper Company at Moss Point, Miss. He has associated with him some of the biggest pulp and paper men in the country. The Stebbins Engineering & Construction Company, of Watertown, N. Y., has been employed as engineers for the firm.

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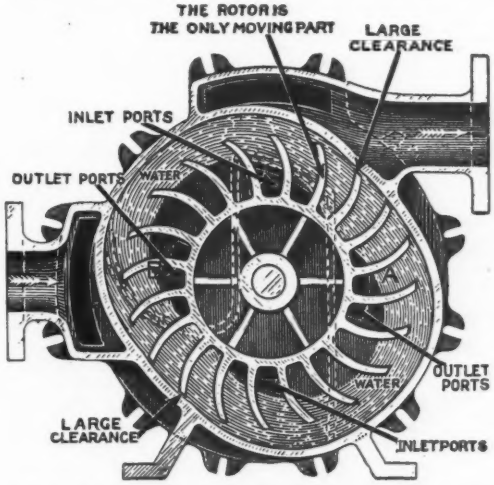

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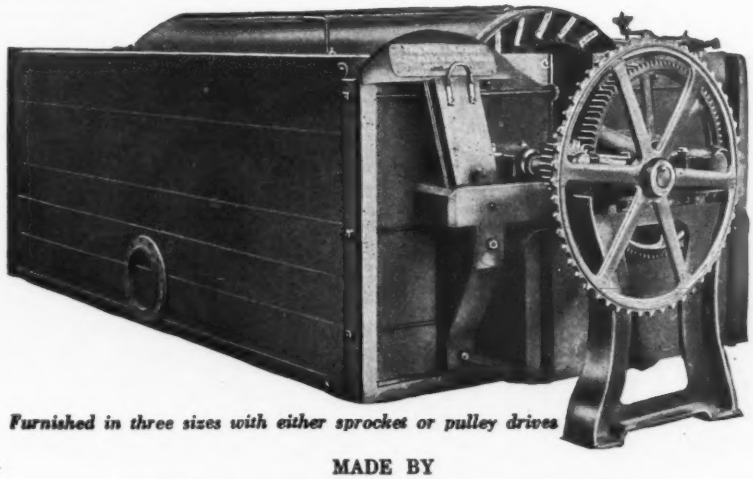

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending April 30, 1922, and for the Nine Months Ended April 30, 1922, as Compared with Corresponding Months of Two Previous Years

IMPORTS—PAPER.

Paper and Manufactures of.	April				Ten Months Ended April 30			
	1921		1922		1921		1922	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Books, Maps, etc., and other printed matter ... Free	.....	$285,920	.....	$229,109	.....	$4,320,187	.....	$3,300,578
Books, Maps, etc., and other printed matter ... Dut.	.....	192,284	.....	194,006	.....	2,054,354	.....	1,794,785
Decalcomania paper, not printed ... Free	.....	5,501	.....	11,446	.....	179,002	.....	80,590
Lithographic Labels and Prints (except Post Cards) ... lbs..Dut.	76,311	63,167	156,759	65,214	981,143	696,783	1,303,242	613,851
Paper Hangings ... Dut.	.....	32,084	.....	43,705	.....	310,289	.....	359,697
Photographic ... lbs..Dut.	43,015	9,144	325,432	102,407	1,231,361	323,400	2,110,678	471,644
Printing Paper—								
News print ... lbs..Free	129,556,507	7,513,087	154,738,775	5,285,534	1,294,194,094	72,047,121	1,524,823,304	59,843,722
All other ... lbs..Dut.	45,486	12,940	50,540	8,112	4,089,183	524,615	347,057	49,512
Post Cards, Souvenir ... Dut.	.....	9,140	.....	5,906	.....	169,606	.....	91,351
Pulp board, in rolls ... lbs..Dut.	3,375,139	100,009	6,177,914	157,020	64,798,892	2,100,845	37,641,724	996,805
Surface-coated ... lbs..Dut.	70,573	21,841	36,859	15,606	1,061,073	291,088	571,651	133,409
Wrapping ... lbs..Dut.	139,587	8,995	3,954,984	147,425	4,905,490	429,338	18,768,553	709,541
All other ... Dut.	.....	292,465	.....	233,085	.....	3,035,164	.....	2,172,787
Total Paper, and Manufactures of ...	.....	$8,546,577	.....	$6,498,575	.....	$86,481,792	.....	$70,618,272

CRUDE PAPER STOCK.

Rags (except woolen) ... lbs..Free	6,570,472	$109,207	22,142,456	$285,722	146,818,092	$5,392,593	171,384,468	$2,513,252
All other kinds of paper stock ... lbs..Free	13,276,256	261,940	8,915,822	228,289	139,016,160	4,857,888	113,464,878	2,477,079

WOOD PULP.

Mechanically ground ... tons..Free	5,078	$216,573	10,533	$318,861	153,532	$11,709,353	182,468	$4,804,623
Chemical—								
Unbleached—								
Sulphate ... tons..Free	5,884	$563,072	15,652	$948,944	111,326	$13,881,374	185,201	$11,154,721
Sulphite ... tons..Free	7,652	646,892	25,589	1,418,783	208,530	29,239,785	269,642	15,154,311
Total ... tons..Free	13,536	$1,209,964	41,241	$2,367,727	319,856	$43,121,159	454,843	$26,309,032
Imported from—								
Norway ... tons	.....	.....	4,359	$239,115	6,273	$996,761	12,919	$657,684
Sweden ... tons	1,441	$120,526	10,076	534,994	80,703	11,482,293	181,178	9,894,970
Canada ... tons	11,965	1,072,763	21,721	1,353,308	207,183	26,712,025	201,720	12,688,940
Other countries ... tons	130	16,675	5,085	240,310	25,697	3,930,080	59,026	3,067,438
Bleached—								
Sulphate ... tons..Free	.....	.....	456	$36,870	8,357	$1,178,657	5,435	$348,613
Sulphite ... tons..Free	2,201	$295,201	16,464	1,438,707	80,848	15,049,942	118,212	$10,258,416
Total ... tons..Free	2,201	$295,201	16,920	$1,475,577	89,205	$16,228,599	123,647	$10,607,029
Imported from—								
Norway ... tons	.....	.....	3,165	$301,281	9,990	$2,255,910	18,677	$1,734,878
Sweden ... tons	.....	.....	4,592	344,149	12,483	2,116,087	16,796	1,197,171
Canada ... tons	2,170	$290,192	8,018	736,374	58,710	10,392,302	72,035	6,526,194
Other countries ... tons	31	5,009	1,145	93,773	8,022	1,464,300	16,139	1,148,786

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.

Colors or dyes, n.e.s. ... lbs..Dut.	220,634	$249,719	357,832	$567,533	2,895,885	$4,360,671	2,853,284	$4,108,599
Imported from—								
Germany ... lbs.	66,247	$62,547	84,584	$146,530	1,110,717	$1,588,272	1,220,127	$1,846,357
Switzerland ... lbs.	118,716	138,200	230,173	397,158	959,067	1,797,106	1,163,614	1,762,983
United Kingdom ... lbs.	34,630	47,681	7,656	7,763	264,719	342,455	278,618	271,539
Other countries ... lbs.	1,041	1,291	35,419	16,082	561,382	632,844	190,925	227,720
Indigo—								
Natural ... lbs..Dut.	12,190	$14,060	.....	.....	133,228	$299,183	20,619	$26,626
Synthetic ... lbs..Dut.	.....	.....	4,198	$4,504	266,804	203,065	434,116	266,998
Alizarin and alizarin dyes ... lbs..Dut.	38,726	29,400	24,191	49,808	314,114	365,642	343,100	542,597
Lactarene or Casein ... lbs..Free	592,802	56,711	1,507,027	101,547	11,547,350	1,350,144	8,995,864	574,229
Lime, Chlor. of ... lbs..Dut.	538,363	12,238	900,050	13,627	3,186,021	108,340	16,957,371	257,222
Magnesite, not purified ... tons..Free	326	21,468	10,443	157,907	37,965	660,042	54,943	984,548
Potash, Hydrate of ... lbs..Free	692,709	45,674	1,197,904	71,822	2,030,815	321,554	11,459,097	491,304
Sulphur or Brimstone ... tons..Free	.....	.....	.....	7	.....	30	2	141
China clay or kaolin ... tons..Dut.	9,643	113,635	27,176	297,304	234,141	2,646,818	156,201	1,630,825

PULP WOOD.

Rough ... cords..Free	19,969	$251,518	10,710	$93,312	305,371	$3,854,566	135,345	$1,592,883
Peeled ... cords..Free	65,754	945,377	50,853	556,623	1,000,159	14,866,942	471,018	5,182,899
Rossed ... cords..Free	2,392	47,790	3,408	42,212	152,386	2,855,266	55,989	843,542
Total ... cords	88,115	$1,244,685	64,971	$692,147	1,457,916	$21,576,774	662,352	$7,619,324

(*Continued on page* 56)

New York Office
280 Broadway

Chicago Office
1148 Otis Bldg.

Howard Bond

Howard Ledger

"The Paper of Many Uses"

Manufactured by

THE HOWARD PAPER COMPANY, Urbana, Ohio

FORGE LAP-WELDED

SOFT STEEL

DIGESTERS

ALL SEAMS LAP-WELDED

VERTICAL SEAMS HEATED WITH FURNACES AND WELDED WITH HYDRAULIC POWER

CIRCUMFERENTIAL SEAMS HEATED WITH FURNACES AND HAMMER WELDED

AMERICAN WELDING COMPANY
CARBONDALE, PA.

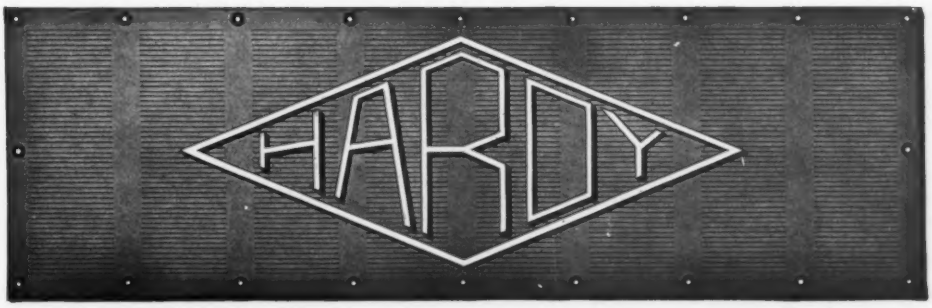
Felt Test—Lowest Cost per Ton

If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts, for ORR felts will produce the lowest cost per ton. They "stand up" under severe usage. Orr durability is acknowledged everywhere. Their strength and long life are as dependable as their reliability and quality.

In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

WILLIAM A. HARDY & SONS COMPANY, Fitchburg, Mass., U.S.A.



PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 54*)

EXPORTS—PAPER.

Paper and Manufactures of.	April 1921 Quantity	April 1921 Value	April 1922 Quantity	April 1922 Value	Ten Months Ended April 30 1921 Quantity	Ten Months Ended April 30 1921 Value	Ten Months Ended April 30 1922 Quantity	Ten Months Ended April 30 1922 Value
Paper, except printed matter (total)	.....	$2,027,604	.....	$2,164,860	.....	$53,179,897	.....	$16,379,417
Printing Paper—								
News Print ..... lbs.	2,556,185	$186,518	6,690,109	$308,928	59,245,533	$4,307,133	32,979,856	$1,558,880
Exported to—								
Canada	52,560	$7,384	294,249	$21,535	1,199,271	$98,650	780,704	$57,048
Cuba	1,313,517	83,735	1,073,906	43,778	15,490,808	1,116,523	13,190,666	595,519
Argentina	168,793	15,211	3,020,076	118,135	23,210,439	1,373,513	7,977,902	313,237
Brazil	.....	.....	21,000	1,065	1,081,841	124,115	185,190	15,501
Uruguay	40,878	3,006	231,261	9,886	1,721,061	108,960	422,896	19,025
Other South America	78,005	5,794	253,581	15,676	4,305,492	397,759	1,961,792	103,135
China	31,125	2,171	361,280	14,593	1,682,183	171,454	1,261,256	51,605
Philippine Islands	462,083	35,714	255,247	11,857	3,341,690	236,416	2,744,582	138,863
Australia	157,775	11,211	.....	.....	891,602	91,449	.....	.....
Other countries	251,449	22,232	1,179,509	72,403	6,321,146	588,294	4,454,868	264,947
Bible or India paper ..... lbs.	.....	.....	197	$20	.....	.....	†8,505	†$1,875
Other book paper, not coated ..... lbs.	2,616,470	$336,186	2,332,234	$234,067	74,290,781	$12,102,379	16,539,014	$1,821,730
Exported to—								
Greece	.....	.....	.....	.....	756,384	$98,100	.....	.....
United Kingdom	38,478	$11,369	23,885	$4,772	1,073,732	240,803	307,651	$60,628
Canada	572,045	51,503	243,035	24,395	4,291,578	596,883	2,261,283	264,813
Mexico	199,563	29,670	107,599	12,350	1,982,408	372,966	2,387,145	272,452
Cuba	331,549	45,631	574,322	55,671	10,889,544	1,911,923	2,357,968	240,895
Argentina	191,137	31,951	31,994	3,451	12,161,485	1,704,890	298,851	39,727
Brazil	64,025	7,880	74,335	8,201	4,851,201	896,170	512,246	75,419
Chile	40,763	6,004	16,538	1,641	974,741	179,332	81,458	10,343
Colombia	218	56	72,926	5,559	1,346,631	232,857	353,622	34,668
Peru	69,415	11,626	11,711	979	1,157,342	202,655	306,608	30,237
Uruguay	57,183	6,970	2,507	219	1,967,332	274,494	2,832	262
Venezuela	26,538	5,447	103,351	13,756	1,333,256	225,852	565,184	68,514
British India	.....	.....	5,216	734	2,939,072	469,014	422,860	42,139
China	22,022	7,046	214,689	21,400	6,279,971	1,057,748	1,381,252	138,909
Dutch East Indies	15,790	5,403	2,000	225	1,207,372	196,606	9,186	1,139
Japan	85,219	9,200	424,940	28,010	1,519,757	206,872	2,218,369	190,772
Philippine Islands	187,725	23,132	210,403	30,234	4,554,251	763,264	1,113,129	128,869
Australia	326,377	36,044	47,381	4,522	7,941,229	1,128,210	548,934	54,104
Other countries	388,423	47,254	165,402	17,998	7,263,495	1,343,740	1,410,436	167,840
Cover paper ..... lbs.	.....	.....	112,378	$16,375	.....	.....	†405,369	†$62,840
Grease-proof and waterproof paper ..... lbs.	.....	$18,212	98,241	10,808	.....	$331,603	.....	72,583
Wrapping paper ..... lbs.	1,997,738	180,046	.....	.....	38,804,625	4,897,731	*11,682,845	*777,175
Kraft wrapping ..... lbs.	.....	.....	50,297	3,960	.....	.....	†316,094	†25,530
Other wrapping ..... lbs.	.....	.....	3,662,815	199,164	.....	.....	†11,887,289	†711,437
Writing paper and envelopes	.....	322,678	.....	.....	.....	7,811,608	.....	*1,033,894
Writing paper, except in papeteries ..... lbs.	.....	.....	716,793	121,045	.....	.....	†2,328,251	†398,197
Surface-coated paper ..... lbs.	.....	.....	264,518	44,575	.....	.....	†996,883	†194,947
Tissue and toilet paper	.....	63,902	.....	.....	.....	1,565,757	.....	*398,118
Tissue and crêpe paper ..... lbs.	.....	.....	182,961	46,997	.....	.....	†738,175	†179,827
Toilet paper ..... lbs.	.....	.....	396,131	38,553	.....	.....	†1,412,094	†150,464
Paper towels and napkins ..... lbs.	.....	11,116	67,669	10,918	.....	336,886	.....	121,382
Bristols and bristol board ..... lbs.	.....	.....	249,068	29,316	.....	.....	†507,548	†64,310
Paper board and straw board ..... lbs.	.....	166,109	3,808,254	158,869	.....	4,583,826	.....	1,272,421
Sheathing and building paper ..... lbs.	.....	.....	533,722	20,936	.....	.....	†1,519,378	†59,602
Wall board of paper or pulp ..... sq. ft.	.....	60,958	1,279,285	44,433	.....	1,263,892	.....	319,072
Cigarette paper and books ..... lbs.	.....	.....	65,956	20,009	.....	.....	†246,221	†100,293
Photographic paper ..... lbs.	.....	.....	126,698	122,383	.....	.....	†533,363	†498,043
Paper hangings (wall paper) ..... yard	.....	80,372	1,488,708	43,054	.....	1,002,090	.....	353,301
Paper bags ..... lbs.	.....	40,957	1,081,488	101,507	.....	1,849,423	.....	718,878
Boxes and cartons ..... lbs.	.....	66,989	1,200,062	73,029	.....	1,798,570	.....	821,014
Carbon paper ..... lbs.	.....	33,379	68,098	53,815	.....	747,347	.....	385,113
Envelopes ..... lbs.	.....	.....	262,034	44,533	.....	.....	†831,094	†154,336
Indurated fiber ware ..... lbs.	.....	.....	9,687	2,132	.....	.....	†77,499	†8,452
Playing cards ..... pack	.....	27,982	289,528	45,101	.....	966,666	.....	332,389
Cash-register and adding-machine paper ..... lbs.	.....	4,635	79,149	8,931	.....	234,367	.....	90,117
Papeteries (writing paper in boxes) ..... lbs.	.....	.....	20,989	7,471	.....	.....	†61,576	†24,156
Other paper and paper products, n.e.s. ..... lbs.	.....	427,565	3,768,051	353,931	.....	9,380,619	.....	3,669,041
Books, maps, pictures, and other printed matter ..... lbs.	.....	$1,755,627	.....	.....	.....	$21,505,302	.....	*$9,481,915
Books and Pamphlets ..... lbs.	.....	.....	1,755,309	$630,556	.....	.....	†6,276,636	†2,313,745
Maps and charts ..... lbs.	.....	.....	7,668	12,061	.....	.....	†39,896	†61,781
Music in books or sheets ..... lbs.	.....	.....	34,273	22,654	.....	.....	†148,821	†107,721
Souvenir post cards ..... lbs.	.....	.....	189,146	20,133	.....	.....	†711,924	†89,503
Lithographically printed matter, except post cards and maps ..... lbs.	.....	.....	118,540	66,306	.....	.....	†546,188	†274,443
Other printed matter ..... lbs.	.....	.....	1,345,928	501,389	.....	.....	†6,116,719	†2,184,431

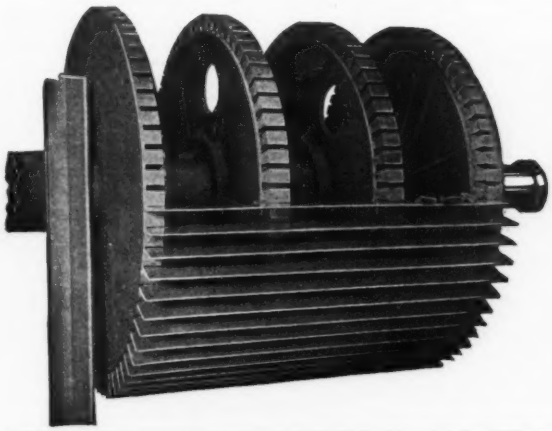
WOOD PULP AND PAPER STOCK.

Wood Pulp ..... tons	1,753	$124,888	.....	.....	22,914	$2,456,274	*11,740	*$614,098
Mechanical wood pulp ..... tons	.....	.....	48	$3,800	.....	.....	†49	$3,859
Sulphite wood pulp ..... tons	.....	.....	1,618	68,235	.....	.....	†6,798	†295,569
Soda wood pulp ..... tons	.....	.....	327	26,766	.....	.....	†1,228	†111,626
Kraft wood pulp ..... tons	.....	.....	.....	.....	.....	.....	.....	.....
Other wood pulp ..... tons	.....	.....	233	19,046	.....	.....	†1,073	†50,484
Rags, and other paper stock ..... lbs.	2,379,498	53,169	7,288,291	115,146	52,617,666	1,664,463	57,355,154	870,562

PAPER AND PULP MILL MACHINERY.

Paper and pulp-mill machinery	.....	$252,671	.....	.....	.....	$3,295,684	.....	*$1,376,074
Pulp-mill machinery ..... lbs.	.....	.....	7,656	$882	.....	.....	†81,033	†20,496
Paper-mill machinery ..... lbs.	.....	.....	426,022	116,808	.....	.....	†2,578,746	†839,999

*July 1 to Dec. 31, 1921. †Jan. 1 to April 30, 1922.



Dilts Machine Works, Inc.

Fulton, N. Y., U. S. A.

Manufacturers of

BEATING and WASHING ENGINES
FLY BARS—BED PLATES—
MACHINE KNIVES

Our new KEYED TYPE BANDLESS ROLL is the final result of Many Years of Experience.

May we not tell you about its many advantages?

PAPER MAKERS CHEMICAL CO.
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FELT SOAP and OTHER SPECIALTIES

SUPERIOR CHEMICAL CO.

JOLIET, ILLINOIS

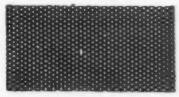
Manufacturers

PAPER MAKERS' and FILTER

ALUM

Perforated Metal Screens

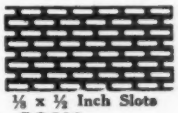
For Pulp and Paper Mills



.065 Inch Round

STEEL, COPPER, BRASS, BRONZE and other Alloys

punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.



⅛ x ½ Inch Slots

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The Union Sulphur Company

Producers of the Highest Grade Brimstone on the market . .

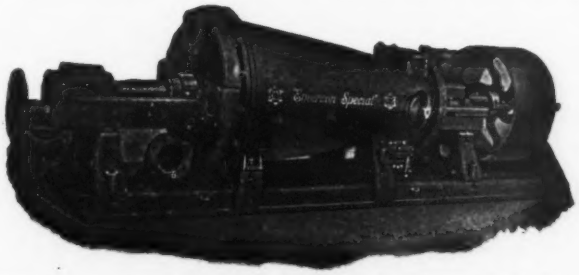
ABSOLUTELY FREE FROM ARSENIC OR SELENIUM

The Largest Sulphur Mine in the World

CALCASIEU PARISH, LOUISIANA

Main Offices: Frasch Building, 33 Rector Street, New York

EMERSON MANUFACTURING CO. LAWRENCE MASS.



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EMERSON
BEATING ENGINES

They seldom wear out and are never thrown out. PERFECT CIRCULATION. NO "PADDLING."

The "EMERSON" JORDAN

does its work with half the power required by others of no greater capacity.

WRITE FOR DETAILS

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, June 28, 1922.

Considering the fact that summer is already upon us and that the usual seasonal let-up in the industry has not been in evidence to any great extent, it appears as though the paper situation were clearing up after all. Everywhere optimism is the keynote. Dealers in news print report that the mills are booked up through July and August. Book paper is improving in demand. The board market is coming up for air and the general tone is hardening. Waste papers are still going strong, with prices stiffening week by week, and finally, the twine market is again "up and doing."

In short, despite the natural handicaps of the summer months when water is low, when mills usually suspend operations or work part time during the general overhauling of machinery, draining of the boilers, making of inventories and during the vacation months, the industry, as a whole, seems to be taking advantage of this period of inertia and converting it into one of productivity and constructive preparation for a booming business next fall.

News print continues to forge ahead in leaps and bounds. Statisticians predict that the year, 1922, will see the largest consumption of this commodity on record. Machines which have been lying idle for months are being started up; smaller producers are reentering the game and the large manufacturers are going full blast. Only a serious coal shortage could affect the market in its present healthy condition. Labor conditions are nearly normal again in the news print industry. The strike which was impending a month ago has passed into ancient history with both the laborer and the manufacturer satisfied.

Although book paper has suffered a slight decline in exports, the market shows a steady week-by-week improvement. Printers and magazine publishers in this country have allowed their stocks to run low with the result that a general price stiffening is anticipated when they re-enter the market actively. Whatever falling off there has been in the volume of business over the few preceding weeks may be attributed to the summer slump, although dealers, in the main, state that consumption is regular, if hand-to-mouth.

While there have been no price changes in the fine paper market, dealers have been catering to a steady domestic demand in spite of highly competitive prices. Fine paper for export has been rather spotty during the last week, but it is generally believed that the American product is rapidly gaining the favor of many Latin-American countries. This outlet for their goods during a period of close buying in this country, has done much to keep the fine paper manufacturers in the running during the past year.

What with the anticipated rise in price of all grades of tissue on July 1, dealers have been booking orders right and left during the past week. Consumers, confident of their ability to secure ample stores of tissue at the prices which have been quoted for the past few weeks, entered the market simultaneously with the announcement of the probable price advance. Mills are now running capacity to take care of this spurt in demand, and it is believed that the amelioration of conditions in the textile and shoe industries will prompt many to stock up normal supplies of the commodity.

Kraft mills are booked into the future and dealers express optimistic sentiments regarding the coming ninety days in the wrapping paper field. It is felt that price advances will come with increased demand, thereby eliminating much of the cut-throat competition which has eaten up the profits of both producer and merchant in recent months.

Orders are coming in more plentifully in the board market, according to several of the leading dealers, and despite the recent price increase consumers are coming into the market more satisfactorily than they have been. Old waste papers are heading skyward as the available supply diminishes, and this has caused merchants to predict an even further boost in board prices. Boxboard continues in good demand, and single manila lined chip board advanced in price during the last week.

Mechanical Pulp

Grinders are hampered by low water, but the oversupply of groundwood on hand enables producers to meet the increasing demand. Contracts are being signed with manufacturers in much greater volume, and the market in general appears to be in a healthier condition than it has been in for months. A general price stiffening is in evidence and this is expected to materialize in substantial advances in the near future.

Chemical Pulp

Last week has seen an increased volume of sales in the chemical pulp market, a stronger demand and a general solidifying of prices. The demand for sulphite pulp is much greater than that for kraft. Buyers of kraft pulp have been out of the market for such a long time that they are now expected to reenter at any moment. One of the largest dealers in chemical pulp stated that prices will probably remain firm at the Swedish Association's minimum price of 2.65 cents a pound, and that fluctuations, if there are any, will have an upward trend.

Old Rope and Bagging

Keeping pace with the other markets, that of old rope is still enjoying a siege of good business. With the recent general price stiffening on all grades of rope, consumers have entered the market in anticipation of a further rise. Manila is in constant demand and supplies are no longer plentiful. Bagging has succeeded in pulling out of the rut and is soon expected to follow the example of raw jute, which has stiffened up materially.

Waste Paper

Consumers are competing for the available stocks of the better grades of waste papers and the tone of the market is one of prosperity. As soon as buyers saw fit to get back into the waste paper market and stock up sizeable amounts, prices automatically went up, proving conclusively that all previous purchasing was conducted on a hand-to-mouth policy. It is reported that the output of binderies was lower than it has been for some time due to the scarcity of such items as No. 1 soft white shavings. Dealers are doing a thriving business and are turning over as much of the better grades as they can secure.

Rags

Prices in the rag market are keeping pace exactly with the demand. At present the demand is regular, with an occasional spurt in one or two grades. Prices have, correspondingly, been low with spasmodic advances in some particular grade. This spotty condition which has prevailed for the past few months is rapidly drawing to a close. Roofing rags, the keynote to the whole rag situation, are going up in price steadily and surely. The entire rag market is gaining momentum day by day, and it now only remains for consumers to start in where they left off some months ago to have a general price increase in proportion.

Twine

Twines are flourishing as a result of recent advances in price and although the demand is not too heavy to be readily taken care of, consumers are certainly displaying more interest in the market than they have evinced for over a year. Dealers say that it will probably not be until fall that business returns in full volume, but they are encouraged by the hardening undertone which has become apparent during the past few weeks.

A. P. Costigane, of Toronto, secretary and engineer of the Ontario Pulp and Paper Makers' Safety Association, recently paid a visit to the mills in the Campbellford and Peterborough district and found much interest evidenced in safety work.

Market Quotations

Paper Company Securities

New York Exchange closing quotations June 27, 1922:

STOCKS	BID.	ASKED.
American Writing Paper Company, pref.	29½	31
International Paper Company, com.	45½	46
International Paper Company, pref., stamped.	66¼	68½
Union Bag & Paper Corporation	62	64

Paper

F. o. b. Mill.

Ledgers	10.50	@	30.00
Bonds	8.50	@	55.00
Writings—			
Extra Superfine	14	@	25
Superfine	13	@	20
Tub Sized	10	@	16
Engine Sized	9.00	@	15.00
News—f. o. b. Mill—			
Rolls, contract	3.50	@	3.75
Rolls, transit	3.50	@	
Sheets	4.00	@	
Side Runs	3.25	@	3.50
Book, Cased—f. o. b. Mill			
S. & S. C.	6.25	@	7.25
M. F.	6.00	@	7.00
Coated and Enamel	8.00	@	10.00
Lithograph	8.00	@	10.00
Tissues—f. o. b. Mill			
White, No. 1	.75	@	.80
Colored	1.00	@	2.00
Anti-Tarnish	.75	@	.80
Silver Tissue	1.50	@	2.70
Manila	.75	@	.80
Kraft—f. o. b. Mill—			
No. 1 Domestic	7.00	@	7.50
No. 2 Domestic	5.75	@	6.25
Imported	6.00	@	6.25
Screenings	2.50	@	3.50
Manila—			
No. 1 Jute	8.50	@	9.00
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.50	@	5.50
No. 2 Wood	4.00	@	4.50
Butchers	4.25	@	4.75
Fiber Papers—			
No. 1 Fiber	6.00	@	6.25
No. 2 Fiber	5.00	@	5.25
Common Bogus	1.75	@	2.25
Card Middies	4.00	@	5.00
Boards—per ton—			
News	35.00	@	45.00
Straw	40.00	@	45.00
Chip	32.50	@	40.00
Binders' Board	60.00	@	70.00
Sgl. Mla. Ll.Chip	52.50	@	62.50
Wood Pulp	75.00	@	90.00
Container	60.00	@	70.00
Wax Paper—			
Self Sealing White 28 and 30 lb. basis	10.00	@	11.00
Waxed Tissue	1.40	@	1.60
Glassine—			
Bleached, basis 25 lbs.	12.75	@	13.25
Bleached, basis 20 lbs.	13.75	@	15.25

Mechanical Pulp

(Ex-Dock.)

No. 1 Imported	32.00	@	38.00

(F. o. b. Pulp Mills.)

No. 1 Domestic	28.00	@	34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports.)

Sulphite (Imported)—			
Bleached	4.00	@	4.50
Easy Bleaching	2.85	@	3.10
No. 1 strong unbleached	2.50	@	2.75
No. 2 Strong unbleached	2.25	@	2.50
No. 1 Kraft	2.50	@	3.00
Sulphate—			
Bleached	3.90	@	4.00

(F. o. b. Pulp Mill.)

Sulphite (Domestic)—			
Bleached	4.00	@	4.50
Strong unbl'chd.	2.60	@	2.80
Easy Bleaching Sulphite	2.60	@	3.10
News Sulphite	2.50	@	2.80
Mitscherlich	2.80	@	3.10
Kraft (Domestic)	2.50	@	3.00
Soda Bleached	3.50	@	3.75

Domestic Rags

New

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—			
New White, No. 1	10.25	@	11.00
New White, No. 2	6.00	@	6.50
Silesias, No. 1	6.00	@	6.50
New Unbleached.	8.50	@	9.00
Washables	3.50	@	4.00
Fancy	5.00	@	5.50
Cotton—according to Grades—			
Blue Overall	5.50	@	6.00
New Blue	4.25	@	4.75
New Black Soft.	3.00	@	3.25
New Light Seconds	2.75	@	3.00
O. D. Khaki Cuttings	3.25	@	3.60
Men's Corduroy	2.50	@	2.75
New Canvas	6.50	@	7.00
New Black Mixed Old	2.25	@	2.75
White, No. 1—			
Repacked	5.60	@	6.10
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	2.75	@	3.00
Miscellaneous	2.10	@	2.35
St. Soiled White	1.15	@	1.25
Thirds and Blues—			
Repacked	1.60	@	1.75
Miscellaneous	1.15	@	1.25
Black stockings	2.25	@	2.50
Roofing Rags—			
Cloth Strippings	1.10	@	1.15
No. 1.	1.10	@	1.15
No. 2.	1.00	@	1.10
No. 3.	.65	@	.75
No. 4.	.65	@	.75
No. 5A	.90		nominal

Foreign Rags

New Light Silesias.	6.00		nominal
Light Flannelettes	6.75		nominal
Unbl'chd Cottons	7.50		nominal
New White Cuttings	9.50		nominal
New Light Oxfords	6.00		nominal
New Light Prints	4.50		nominal
New Mixed Cuttings	2.00	@	2.50
New Dark Cuttings.	1.90	@	2.10
No. 1 White Linens	9.00	@	11.00
No. 2 White Linens	6.50		nominal
No. 3 White Linens	5.00		nominal
No. 4 White Linens	3.50		nominal
Old Extra Light Prints	2.00		nominal
Ord. Light Prints	1.75		nominal
Med. Light Prints.	1.50		nominal
Dutch Blue Cottons	1.85		nominal
German Blue Cottons	1.50		nominal
Ger. Blue Linens	3.50		nominal
Checks and Blues	1.50		nominal
Dark Cottons	1.10	@	1.15
Shoppery	.90	@	.95
French Blues	2.00		nominal

Bagging

Prices to Mill f. o. b. N. Y.

Gunny No. 1—			
Foreign	.80	@	.85
Domestic	.80	@	.85
Wool, Tares, light.	1.00	@	1.10
Wool, Tares, heavy	1.10	@	1.15
Bright Bagging	.90	@	1.00
No. 1 Scrap	.80	@	.90
Sound Bagging	.75	@	.85
Manila Rope—			
Foreign	5.00	@	5.25
Domestic	5.25	@	5.50
New Bu. Cut	1.80	@	1.90
Hessian Jute Threads—			
Foreign	2.00	@	2.50
Domestic	2.00	@	2.25
Mixed Strings	.75	@	.85

Twines

Cotton—(F. o. b. Mill)			
No. 1	.33	@	.35
No. 2	.31	@	.33
No. 3	.27	@	.29
India, No. 6 basis—			
Light	.18	@	.19
Dark	.18	@	.19
B. C., 18 Basis	.39	@	.41
A. B. Italian, 18 Basis	.51	@	.61
Finished Jute—			
Light, 18 basis	.26	@	.27
Dark, 18 basis	.27	@	.29
Jute Wrapping, 3-6 Ply—			
No. 1	.23	@	.24
No. 2	.31	@	.32
Tube Rope—			
4-ply and larger.	.15	@	.17
Fine Tube Yarn—			
5-ply and larger.	.19	@	.21
4-ply	.20	@	.22
3-ply	.20	@	.22
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.18
Jute Rope	.13	@	.15
Amer. Hemp, 6	.33	@	.35
Sisal Hay Rope—			
No. 1 Basis	.15	@	.17
No. 2 Basis	.13	@	.15
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

Old Waste Papers

(F. o. b. New York)

Shavings—			
Hard, White, No. 1	3.90	@	4.10
Hard, White, No. 2	3.50	@	3.65
Soft, White, No. 1	3.55	@	3.65
Flat Stock—			
Stitchless	1.85	@	1.95
Over Issue Mag.	1.85	@	1.95
Solid Flat Book	1.75	@	1.85
Crumpled No. 1	1.25	@	1.35
Solid Book Ledger.	2.00	@	2.50
Ledger Stock	1.75	@	1.95
No. 1 White News	1.70	@	1.80
New B. B. Chips	.60	@	.65
Manilas—			
New Env. Cut	2.40	@	2.60
New Cut No. 1	1.75	@	1.90
Extra No. 1, Old	1.50	@	1.60
Print	.90	@	1.00
Container Board.	.65	@	.75
Bogus Wrapper	.60	@	.70
Old Krafts, machine compressed Bales	1.80	@	1.90
News—			
Strictly Overissue	.75	@	.85
Strictly Folded	.67½	@	.72½
No. 1 Mixed Paper	.55	@	.60
Common Paper	.35	@	.40

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	30	@	35
No. 2 Rag Bond	18	@	20
Water Marked Sulphite	10	@	14
Sulphite Bond	9	@	12
Sulphite Ledger	12	@	13
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	22
No. 2 Fine Writing	12	@	20
No. 3 Fine Writing	8	@	12
No. 1 M. F. Book	6¼	@	7
No. 1 S. & S. C. Book	6¼	@	7½
Coated Book	8¾	@	10¾
Coated Label	8½	@	10½
News—Rolls, mill	3½	@	4½
News—Sheets, mill.	3¾	@	4¾
No. 1 Manila	5	@	5½
No. 1 Fiber	4½	@	5
No. 2 Manila	4	@	4½
Butchers' Manila	4	@	—
No. 1 Kraft	6¾	@	7
No. 2 Kraft	5¾	@	6
Wood Tag Boards	4	@	—
Screenings	2½	@	—
Boards, per ton—			
Plain Chip	35.00	@	40.00
Solid News	40.00	@	45.00
Manila Lined Chip	45.00	@	52.50
Container Line—			
85 Test	55.00	@	60.00
100 Test	[illegible]		
Binders' Board	75.00	@	—
Solid Wood Pulp	80.00	@	90.00
Straw Board	35.00	@	40.00
Filled Pulp Board	55.00	@	60.00

Old Papers

Shavings—			
No. 1 Hard White	3.50	@	3.75
No. 1 Soft Shav.	3.25	@	3.35
No. 1 Mixed	1.10	@	1.25
No. 2 Mixed	1.00	@	1.10
White Envel. Cuttings	3.50	@	3.75
Ledgers and Writings	1.75	@	1.85
Solid Books	1.50	@	1.60
No. 1 Books, light	.90	@	1.00
Blanks	1.75	@	2.00
Ex. No. 1 Manila	1.90	@	2.00
Manila Envelope Cuttings	2.00	@	2.10
No. 1 Manilas	[illegible]		1.10
Folders News (over issue)	.80	@	.85
Old Newspaper	.75	@	.80
Mixed Papers	.70	@	.75
Straw Clippings	.70	@	.75
Binders Clippings	.70	@	.75
Kraft	1.75	@	2.00
New Kraft Cuts	2.00	@	2.10
Roofing Stock, f.o.b. Chicago, Net Cash—			
No. 1	25.00	@	—
No. 2	23.00	@	—
No. 3	21.00	@	—
No. 4	21.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10	@	.60
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.06	@	.09
Book, S. S. & C.	.08	@	.15
Book, Coated	.08	@	.15
Coated Lithograph	.10	@	.15
Label	.08	@	.15
News	.05	@	.07
No. 1 Jute Manila.	.12	@	.13
Manila Sul., No. 1.	.08	@	.08½
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.02½	@	.03
Straw Board	35.00	@	45.00
News Board	32.50	@	35.00
Chip Board	27.50	@	32.00
Wood Pulp Board (Carload Lots)	90.00	@	100.00
Binder Boards—			
Per ton	$65.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	48.00	@	50.00
Slaters	54.00	@	56.00
Best Tarred, 1-ply (per roll)	1.35	@	1.50
Best Tarred, 2-ply (per roll)	1.00	@	1.15
Best Tarred, 3-ply	1.50	@	1.65

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	.75	@	—
Domestic	.70	@	—
Manila Rope	4.00	@	4.50
Sisal Rope	.75	@	.80
Mixed Rope	.75	@	.80
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy.	2.50	@	2.75
Mixed Strings	.75	@	.80
No. 1, New Lt. Burlap	.75	@	.80
New Burlap Cuttings	1.75	@	2.10

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.00	@	4.25
No. 2, Hard White	3.50	@	3.75
No. 1 Soft White	3.35	@	3.50
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	1.50	@	1.75
No. 2 Mixed	1.00	@	1.25

(Continued on page 62)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JUNE 24, 1922

SUMMARY

News Print....4,052 rolls.
Wrapping Paper....912 rolls, 1,553 bls.
Packing Paper....2,398 rolls, 205 bls., 6 cs.
Kraft....498 rolls, 222 bls.
Colored Paper....12 cs.
Surface coated Paper....56 cs.
Printing Paper....135 cs.
Hangings....3 bls.
Wall Paper....3 cs., 3,267 rolls, 7 bls.
Cigarette Paper....1,410 cs.
Miscellaneous Paper..353 cs., 2,563 rolls, 542 bls.

CIGARETTE PAPER.

British American Tobacco Co., Celtic, Liverpool, 25 cs.
P. J. Schweitzer, La Touraine, Havre, 72 cs.
American Tobacco Co., West Eldora, Havre, 103 cs.
American Tobacco Co., Schodack, Bordeaux, 800 cs.
R. J. Reynolds Tobacco Co., by same, 260 cs.
American Tobacco Co., Niagara, Bordeaux, 100 cs.
De Mauduit Paper Corp., Braga, Marseilles, 50 cs.
Liggett & Myers Tobacco Co., by same, 13 cs.

WALL PAPER.

W. H. Lloyd & Co., Gothland, Antwerp, 1 cs.
A. Murphy & Co., by same, 2 cs.
F. G. Prager Co., by same, 1,912 rolls.
A. C. Dodman, Jr., by same, 5 bls.
A. C. Dodman, Jr., Mauritania, Liverpool, 2 bls.
F. G. Prager Co., Finland, Antwerp, 1,355 rolls.

PAPER HANGINGS.

A. C. Dodman, Jr., Celtic, Liverpool, 3 bls.

PRINTING PAPER.

Parsons Trading Co., M. S. Dollar, Genoa, 12 cs.
P. C. Zuhlke, Finland, Antwerp, 16 cs.
B. F. Drakenfeld & Co., Celtic, Liverpool, 6 cs.
British American Tobacco Co., City of Oran, Shanghai, 101 cs.

NEWS PRINT.

New York American, Malmen, Hallstavik, 4,052 rolls.

SURFACE COATED PAPER.

P. C. Zuhlke, Finland, Antwerp, 43 cs.
M. G. Lange, Peninsular State, Bremen, 13 cs.

COLORED PAPER.

L. A. Consmiller, Wurtemburg, Hamburg, 12 cs.

WRAPPING PAPER.

E. C. Melby, Idefjord, Trondhjem, 473 rolls.
E. C. Melby, by same, 34 bls.
Chemical National Bank, by same, 130 bls.
Chemical National Bank, by same, 226 rolls.
Irving National Bank, by same, 29 bls.
E. C. Melby, Stavangerfjord, Kristiania, 174 bls.
Irving National Bank, by same, 1,119 bls.
Wilkinson Bros. & Co., Inc., McKeesport, Rotterdam, 127 rolls.
Salmen Paper Co., Malinen, Gothenburg, 86 rolls.
Salmen Paper Co., by same, 76 bls.

PACKING PAPER.

Wilkinson Bros. & Co., Inc., Idefjord, Sarpsborg, 188 bls.
Wilkinson Bros. & Co., Inc., by same, 2,398 rolls.
Merchant Bank of Rochester, by same, 17 bls.
Globe Shipping Co., Peninsular State, Bremen, 6 cs.

KRAFT PAPER.

Hudson Trading Co., Malmen, Gothenburg, 156 bls, 196 rolls.
Manhattan Co., by same, 302 rolls.
Manhattan Co., by same, 66 bls.

FILTER PAPER.

C. G. Euler Co., Niagara, Bordeaux, 35 bls.
E. Fougera Co., by same, 60 cs.

PAPER.

Gevaert Co., Finland, Antwerp, 4 cs.
L. Bamberger & Co., La Touraine, Havre, 8 cs.
Hensel, Bruckman & Lorbacher, Wurttemburg, Hamburg, 5 cs.
Irving National Bank, by same, 10 cs.
H. Reeve Angel & Co., Pen. State, Bremen, 236 rolls.
H. Reeve Angel & Co., by same, 190 bls.
Parsons & Whittemore, by same, 1,051 rolls.
J. B. Harris Co., by same, 286 rolls.
Whiting & Patterson, France, Havre, 2 cs.
Hudson Trading Co., Saxonia, Hamburg, 347 bls.
Hudson Trading Co., Oscar II, Gothenburg, 332 rolls.
Hudson Trading Co., by same, 28 bls.
M. O'Meara Co., by same, 93 rolls.
Irving National Bank, Oscar II, Copenhagen, 82 bls.
Irving National Bank, by same, 563 rolls.
Wilkinson Bros. & Co., Inc., by same, 2 rolls.
H. D. Catty & Co., Minnekahda, Hamburg, 7 cs.
L. A. Roumer, Lafayette, Havre, 4 cs.
Wilkinson Bros. & Co., Inc., Ornita, Hamburg, 28 bls.
Coenca, Morrison & Co., by same, 36 cs.
P. C. Zuhlke, Gothland, Antwerp, 133 cs.
Herman Lips, by same, 61 cs.
Japan Paper Co., by same, 26 cs.
Wilkinson Bros. & Co., Inc., by same, 20 bls.
Gevaert Co. of America, by same, 13 cs.
Keuffel & Esser, by same, 3 cs.
C. H. Roulin, Braga, Marseilles, 38 cs.
F. C. Struppe Co., by same, 3 cs.

RAGS, BAGGING, ETC.

E. J. Keller Co., Inc., Columbia, Glasgow, 16 bls. threads.
Castle, Gottheil & Overton, Ryndam, Rotterdam, 35 bls. rags.
Ladenburg, Thalman & Co., Galtymore, Leih, 12 bls. rags.
Ladenburg, Thalman & Co., Niagara, Bordeaux, 20 bls. rags.
L. H. Abenheimer, Nevisian, Manchester, 163 bls. baggings.
E. J. Keller Co., Inc., La Touraine, Havre, 135 bls. baggings.
Castle, Gottheil & Overton, by same, 54 bls. rags.
Goldman, Sachs & Co., Wurttemburg, Hamburg, 219 bls. rags.
Salomon Bros. & Co., Marengo, Hull, 14 bls. rags.
M. Wolfer, Ulna, Havana, 3 bls. rags.
M. O'Meara Co., Lepanto, Antwerp, 46 bls. thread waste.
Mechanics & Metals National Bank, by same, 32 bls. flax waste.
National City Bank, Celtic, Liverpool, 54 bls. thread waste.

OLD ROPE.

E. K. Keller Co., Inc., Lepanto, Newcastle, 168 coils.
Brown Bros. & Co., by same, 109 coils.
W. Schall & Co., Carenco, Barcelona, 113 bls.
Terminal Rag & Metal Co., Ulna, Havana, 3 bls.
Brown Bros. & Co., Marengo, Hull, 36 coils.
J. Perlman, Pastores, Havana, 3 bls.
E. J. Keller Co., Inc., Galtymore, Leith, 102 coils.
E. J. Keller Co., Inc., Gattymore, Leith, 17 bls.
E. J. Keller Co., Inc., Poleric, Algiers, 255 bls.

CASEIN.

Kalbfleisch Corp., T. Fagebund, Santa Fe, 1,417 bags, 85,020 kilos.
T. M. Duche & Sons, T. Fagebund, Buenos Aires, 1,168 bags, 70,080 kilos.
Irving National Bank, La Touraine, Havre, 188 bags.
S. Karpen & Bros., Niagara, Bordeaux, 2 bags.

WOOD PULP.

R. F. Hammond, Idefjord, Greaker, 1,000 bales, 200 tons.
E. M. Sargeant & Co., by same, 750 bales.
Nilsen, Lyons & Co., Inc., Idefjord, Kristiania, 400 bales.
J. Andersen & Co., Stavangerfjord, Kristiania, 750 bales.
Seggermann Bros., Oscar II, Gothenburg, 750 bales.
Johansson, Walcs & Spaire, Inc., Malmen, Norrkoping, 1,000 bales.
Brown Bros. & Co., Resolute, Hamburg, 1,500 bales, 304 tons.
Irving National Bank, Malmen, Gothenburg, 36 bls. wood pulp boards.
M. O'Meara Co., Malmen, Gothenburg, 3 bls. wood pulp boards.

WOOD FLOUR.

B. L. Loherski, Stavangerfjord, Kristiania, 1,046 bags.
B. L. Loherski, Idefjord, Kristiania, 2,250 bags.
Alfred Kramer & Co., Orbita, Hamburg, 243 bags.

BALTIMORE IMPORTS

WEEK ENDING JUNE 24, 1922

Katzenstein & Keene, Breedyk, Rotterdam, 28 bales rags.
A. J. Pagel & Co., Inc., Malmen, Stockholm, 450 bales wood pulp.
American Wood Pulp Corp., by same, 2,100 bales wood pulp.
American Wood Pulp Corp., by same, 764 reels paper.

BOSTON IMPORTS

WEEK ENDING JUNE 24, 1922

Burmon & Balonsky, Lafayette, Havre, 77 bls. rags.
American Express Co., by same, 11 bls. rags.
Katzenstein & Keene, Breedyk, Rotterdam, 42 bls. rags.
Katzenstein & Keene, Breedyk, Rotterdam, 79 coils old rope.
Bemis Bros. Bag Co., Marengo, Hull, 457 coils old rope.
R. F. Hammond, Dania, Gothenburg, 500 bls. wood pulp, 100 tons.
M. Gottesman & Co., by same, 500 bls. wood pulp.
A. Katzenstein & Co., Belgian, Liverpool, 128 bs. new rags.
Train, Smith Co., by same, 57 bs. new rags.
Order, by same, 69 bs. rags.
E. Butterworth & Co., Inc., Valemore, Liverpool, 157 bls. bagging.
E. Butterworth, Inc., Mirian, Liverpool, 54 pkgs. rope.
International Purchasing Co., by same, 264 coils Manila rope.
E. F. Russ Co., Belgian, Liverpool, 230 bgs. hide cuttings.
E. Butterworth & Co., by same, 151 bags hide cuttings.

PHILADELPHIA IMPORTS

WEEK ENDING JUNE 24, 1922

E. J. Keller Co., Inc., Breedyk, Rotterdam, 460 bls. rags.
Castle, Gottheil & Overton, Man. Exchange, Manchester, 143 bls. rags.
Ladenburg, Thalman & Co., W. Eldara, Havre, 95 bls. rags.
Castle, Gottheil & Overton, Storm King, Rotterdam, 626 bls. rags.
E. J. Keller Co., Inc., by same, 722 bls. rags.
Katzenstein & Keene, Breedyk, Rotterdam, 169 bls. rags.
Katzenstein & Keene, Phoebus, Marseilles, 240 bls. rags.
Phila. National Bank, Galtymore, Liverpool, 126 coils rope.

MONTREAL IMPORTS

WEEK ENDING JUNE 24, 1922

Katzenstein & Keene, Vermonia, London, 124 bls. rags.
Katzenstein & Keene, Verbania, London, 182 bls. rags.
Katzenstein & Keene, West Kebar, Rotterdam, 449 bls. rags.

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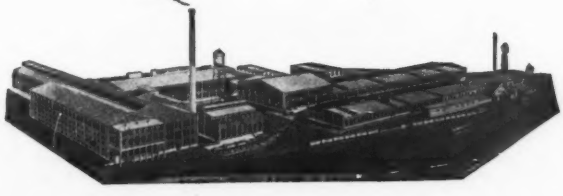
Pure White Waxed Paper
Bond—White and Six Colors
Manifold—Substance 8 and 10.



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New York City

(Cable address - Pulp, N.Y.)

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, June 28, 1922.

ALUM.—Quoted at 3.90 a pound in powdered form, 3.65 in ground and 3.50 cents in lump, alum has remained fairly firm probably due to the light production which is just offset by the slow demand. Dealers report that just enough is going into consuming channels to meet immediate requirements.

BLEACHING POWDER.—Due to the slight activity in the bleach market, it is expected that the present quoted prices of 1.60 cents a pound may be slightly lowered before the close of the summer season.

BLANC FIXE.—This commodity has been holding its own at the slightly lowered price of $37.50 to $45 per ton for blanc fixe pulp, and from 3.50 to 3.75 cents a pound for the dry.

CASEIN.—Still quoted at the nominal price of 10.00 to 14.00 cents a pound, Argentine casein is practically impossible to obtain in any quantity. The uncertainty regarding the proposed tariff of 4.00 cents a pound on imported casein has resulted in a bullish tendency on the part of dealers, but imports and sales are not in sufficient volume to warrant the quoting of a fixed market value.

CAUSTIC SODA.—Caustic is still evincing a regular activity at the slightly higher quoted price of 3.40 to 3.50 cents a pound. Dealers attribute this to the inroads which are being made on the reserve supplies of the commodity during these weeks of light production.

CHINA CLAY.—That a new price on English China clay will be established shortly is the belief of several dealers of this city, and it is generally conceded that considerable activity in the market is imminent. Despite the large quantities of the commodity on the ground in England, the imported has held at $13 to $18 per ton with domestic washed and unwashed following at $8 to $10 and $6 to $8 respectively.

LIQUID CHLORINE.—Despite increased competition in the chlorine market there is still a wide variation in quoted prices. Tank-car lots are quoted as low as 4.50 cents a pound, while liquid chlorine in 100-pound cylinders is quoted up to 7.00 cents.

ROSIN.—With the market abroad entering into the domestic rosin field actively and the demand from consumers here continuing unabated, prices have held firm at $5.20 per 280-pound barrel.

SALTCAKE.—The scarcity of saltcake, brought about by a prolonged period of inactivity on the part of acid producers, has given the market for this commodity a steady upward trend. Further advances are expected over the present quoted prices of $20 to $22 per ton for acid cake and $18 for chrome cake.

SATIN WHITE.—A regular quantity of satin white is entering consuming channels and the price of 1.50 to 2.00 cents a pound has not altered.

SODA ASH.—Increased foreign and domestic demands have firmed the tone of the soda ash market, the quoted price of 1.50 cents a pound, works, still holding.

SULPHUR.—At $18 to $20 per ton, New York, sulphur has continued to move regularly.

STARCH.—Quoted at 2.47 and 2.75 cents a pound for bag and barrel lots respectively, paper maker's starch has continued in fair demand. Pearl starch is quoted at the lower figure of 2.37 and 2.65 for these amounts.

SULPHATE OF ALUMINA.—Considerable close competition in this market has kept prices to a level at which sulphate is unprofitable to handle extensively. The iron free has been quoted at 2.15 to 2.35 cents a pound while the plain is listed at 1.40 to 1.50.

TALC.—Domestic talc is firm and consumption is approximately normal, giving the market a healthy tone. Talc is quoted from $15 to $17 a ton depending upon the quality.

Market Quotations

(*Continued from page 59*)

Solid Ledger Stock.	2.25	@	2.50
Writing Paper.....	1.80	@	2.00
No. 1 Books, heavy.	1.60	@	1.75
No. 2 Books, light.	1.40	@	1.50
No. 1 New Manila.	2.75	@	3.00
No. 1 Old Manila..	1.50	@	1.75
Container Manila..	1.00	@	1.10
Old Kraft.....	2.00	@	2.25
Overissue News....	.75	@	.80
Old Newspaper....	.50	@	.60
No. 1 Mixed Paper.	.45	@	.50
Common Paper....	.40	@	.50
Straw Board, Chip.	.40	@	.45
Binders' Bd. Chip.	.40	@	.45

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.10	@	.10¼
New White, No. 2	.05½	@	.06½
Silesias, No. 1....	.05½	@	.06
New unbleached..	.09	@	.09½
Washables	.03½	@	.03¾
Fancy	.04¼	@	.04¼
Cottons—according to grades—			
Blue Overall.....	.04½	@	.05¾
New Blue.....	.02	@	.02¼
New Black Soft.	.03	@	.03¼
New Light Second Old	.02	@	.02¼
Khaki Cuttings...	.02¾	@	.03¼
Corduroy	.02	@	.02½
New Canvas.....	.07	@	.07¾
New Black Mixed	2.75	@	3.00
White, No. 1—			
Repacked	.06	@	.06½
Miscellaneous ...	.04½	@	.04¾
White, No. 2—			
Repacked	.03	@	.03½
Miscellaneous ...	.02½	@	.02¾
Thirds and Blues—			
Repacked	1.65	@	1.80
Miscellaneous ...	1.40	@	1.55
Black Stockings....	1.75	@	2.25
Roofing Stock—			
No. 1.....	1.00	@	1.10
No. 2.....	.90	@	1.00
No. 3.....	.80	@	.90
No. 4.....	.80	@	.90
No. 5A.....		nominal	
B.....		nominal	
C.....		nominal	

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.06¾	@	.31
Ledgers	.07½	@	.22½
Writings	.07½	@	.22½
Superfine	.15	@	.22½
Fine	.15	@	.18
Books, S. & S. C...	.07	@	.10
Books, M. F.	.06½	@	.07½
Books, coated	.08	@	.10
Label	.08½	@	.09½
News sheets	3.75	@	—
News, rolls	3.50	@	—
Manilas—			
No. 1 Manila ...	$6.75	@	
No. 1 Fibre	.07½	@	—
No. 1 Jute.....	8.50	@	8.75
Kraft Wrapping ...	.06¼	@	.07
Common Bogus ...	3.00	@	

Boards

(Per Ton Destination)

Chip	$35.00	@	37.50
News, Vat Lined...	36.50	@	38.50
Wood, Vat Lined..	47.25	@	
Filled News Board..	37.50	@	
Solid News Board..	42.00	@	45.00
S. Manila Chip....	$2.50	@	
Pat. Coated.....	70.00	@	75.00

Old Papers

Shavings—			
No. 1 Hard White	3.70	@	3.90
No. 1 Soft White	3.30	@	3.45
No. 1 Mixed....	1.50	@	1.75
Ledgers & Writings	.03½	@	—
Solid Books	1.85	@	2.10
Blanks	1.30	@	1.45
No. 2 Books Light.	.60	@	.70
Folded News, overissues	$11.25	@	12.50
Mixed paper.....	47.50	@	50.00
Gunny Bagging....	.70	@	.75
Manila Rope.....	4.25	@	4.50
Common Paper....	.35	@	.40
Old News.....	.80	@	
Old Kraft.....	1.75	@	1.80

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted.....	.12	@	.13½
Dark tinted.....	.13½	@	.15
Ledgers (sulphite).	—	@	.13
Writing	.10½	@	.13½
News, f. o. b. Mills—			
Rolls (carloads).	3.50	@	
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.50
Book—			
No. 1 M. F. (carloads)	9.50	@	—
No. 2 M. F. (carloads)	8.50	@	—
No. 3 M. F. (carloads)	8.00	@	—
No. 1 S. C. (carloads)	10.00	@	—
No. 2 S. C. (carloads)	9.00	@	—
No. 1 Coated and litho.	14.00	@	—
No. 2 Coated and litho.	13.00	@	—
No. 3 Coated and litho.	12.25	@	—
Coated and litho., colored	14.25	@	—
Wrapping—			
Grey	4.50	@	—
White Wrap	5.00	@	—
"B" Manila	5.50	@	—
No. 1 Manila ...	6.75	@	—
Fibre	6.75	@	—
Kraft, M. F.	8.00	@	—
M. G.	8.15	@	—

Pulp

(F. o. b. Mill)

Ground wood....$	27.50	@	35.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade.	50.00	@	60.00
Sulphite, bleached..	90.00	@	95.00
Sulphate	70.00	@	

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut..	3.75	@	—
Soft White Book Shavings	3.40	@	—
White Blk News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.70	@	—
Light and Crumpled Book Stock	1.55	@	—
Ledgers and Writings	1.95	@	—
Solid Ledgers....	1.95	@	—
Manilas—			
New Manila Cut.	1.70	@	—
Printed Manilas..	.90	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News....	.80	@	—
No. 1 Mixed Papers	.60	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto.		Per lb.	
No. 1 White shirt cuttings	.09¾	@	.10
No. 2 White shirt cuttings	.05½	@	.05¾
Fancy shirt cuttings	.04¼	@	.04½
No. 1 Old whites	.04	@	—
Thirds and blues	.02	@	.02½
		Per cwt.	
Black stockings..	2.00	@	2.25
Roofing stock:			
No. 1.....	1.35	@	—
No. 2.....	1.20	@	—
Roofing stock:			
Manila rope	.05	@	.05½
No. 2.....	.01½	@	—
Gunny bagging....	1.00	@	1.25

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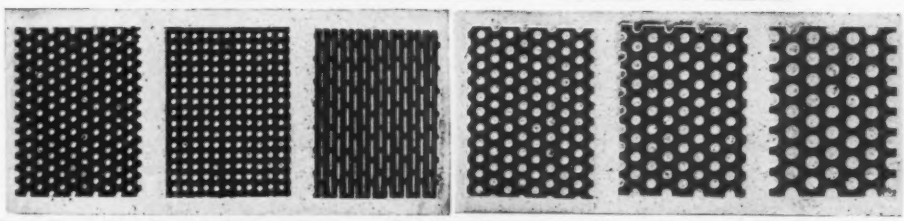

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SITUATION WANTED, 4 cents a word for first insertion and 2 cents a word for each subsequent insertion of same ad. No ad of less than 25 words accepted.

HELP AND MISCELLANEOUS WANTS, and small For Sale Ads, 4 cents a word for each and every insertion. No ads of less than 25 words accepted.

When answering advertisements, please address the Box Number given in ad.

Answers can be forwarded care Paper Trade Journal, and will be promptly forwarded without extra charge. All should be sent to the New York office, 10 East 39th street. And all should be addressed as the advertisement directs in every case and not simply to the paper.

All classified ads for the current issue must be in hand not later than Monday preceding date of publication.

HELP WANTED

WANTED: Beaterman and Machine Tender experienced on Glassine Paper. Eight-hour shifts. Address, Box 5225, care Paper Trade Journal. Je-29

SALESMAN—Large reputable New York Coarse Paper Jobber looking for man with established trade anxious to make change with concern having small selling staff. Splendid opportunity for right man. Drawing account against commission basis. Address, Box 5224, care Paper Trade Journal. Jy-6

WANTED Paper Mill Man, having experience in selling Cylinder Machine Specialties, to sell the output of a large Cylinder Machine Paper Mill. Must be able to develop new fields of use for products that can be manufactured in such plant. Applicants will not be considered unless they have earned at least $7,500 per year. Address, Box 5213, care Paper Trade Journal. Je-29

SALESMAN to represent group of mills in Philadelphia and vicinity; must be experienced and know Paper Jobbers; resident of Philadelphia preferred; write fully stating experience, salary expected; correspondence confidential. Address, Box 5214, care Paper Trade Journal. Je-29

WANTED: Machine Tenders experienced on Cylinder Machines on Roofing Felt, sixty-eight cents per hour. Eight-hour shifts, steady work. Mill located in the East. Address, Box 5215, care Paper Trade Journal. Jy-6

WANTED: Three first-class all-round finishers. Book, Bonds and Writing Papers. Southern mill, good working conditions. Only steady, reliable men apply. Recommendations required. Address, Box 5216, care Paper Trade Journal. Je-29.

WANTED: Two first-class Beatermen for Box Board Mill. Give age, references, experience and where last employed. Address, Box 5217, care Paper Trade Journal. Je-29

WANTED: Salesman experienced in selling Waxed Papers, including Lunch Rolls, Butter Wrappers and Bread Wrappers, for the Atlantic Seaboard States, south of Virginia, including Tennessee and Alabama. Address, Box 5218, care Paper Trade Journal. Je-29

SALESMAN WANTED—Experienced in selling Paper Bags, Wooden-ware, etc. one with following among retail trade. Satisfactory terms. Address, Box 5227, care Paper Trade Journal. Je-29

WANTED—Young man to act as Business Manager for Toilet and Tissue Mill. Send copies of references and state experience, especially if have had sales experience. Address, Box 5191, care Paper Trade Journal. Jy-13

WANTED—Machine Adjuster and Tender. Man experienced on Potdevin Automatic Bag Machine. Apply stating experience to Box 5193, care Paper Trade Journal. Je-29

HELP WANTED

SUPERINTENDENT WANTED by modern progressive mill located in Middle Wesct. Must be fully up to date on cylinder tissue, have some knowledge of converting, be good at handling help. Man not over 35 years old preferred. Applicant must state age, past and present connections, salary now receiving if employed and other information considered of interest to a prospective employer. Address, Box 5192, care Paper Trade Journal. tf

WANTED—Felt Mill Superintendent for California. Thoroughly experienced man on machine making Roofing Felt and Sheathing Paper. Capable of assisting in purchase and erection of new Mill and with ability to economically operate and secure maximum production after erection. Must be successful manager. Give complete experience in first letter. Address, Box 5194, care Paper Trade Journal. Jy-13

WANTED—Super Calender Men and Back Tenders on fast running book machine. Good wages. Address, Box 5205, care Paper Trade Journal. Je-29

WANTED—One first class four Cylinder Machine Tender. Experienced with various weights and thicknesses. Must also understand Harper Machine. Steady work. Eight hour tours. Good pay. Address, Box 5208, care Paper Trade Journal. Jy-6

BOOK PAPER MILLS in the vicinity of Philadelphia is in the market for salesmanager, familiar with the Book Trade. Applicants, address, Box 5210, care Paper Trade Journal, giving age, experience, and previous connections. Je-29

WANTED: First class machine tender and back-tender, experienced on felt and asbestos papers. Sober, industrious men. References, age, married or single in first letter. Address, Box 5169, care Paper Trade Journal. Jy-13

TWO BACKTENDERS wanted for Pacific Coast Mill. Excellent opportunity for advancement. Three tours. Good wages. Address, Box 5170, care Paper Trade Journal. Jy-6

WANTED: A good machine tender with experience on cylinder machines making old rope paper. Steady work for the right man. Address, Box 5171, care Paper Trade Journal. tf

WANTED: Beaterman, middle age man preferred. One used to beating Kraft and Bond Paper. One Sheeter Man, one Kidder Pressman, one Back-Tender. State experience and wages expected. Address, Box 5172, care Paper Trade Jounrnal.

SITUATIONS WANTED

MACHINE TENDER wants position experienced on Harper Machine on Tissues of all grades; also have experience on Edwards Machine and can furnish best of references. Address, Box 5226, care Paper Trade Journal. Je-29

COATING MILL SUPERINTENDENT now employed, desires to make a change. Twenty-four years of sound practical experience on all grades of coated papers. For further information, address, Box 5219, care Paper Trade Journal. Je-29

BOSS BEATERMAN wants position. Accustomed to nearly all grades. Up-to-date color man. Good references. Can get good results if given a chance. Address, Box 5220, care Paper Trade Journal. Jy-13

PRACTICAL MASTER MECHANIC desires position. Capable of installing and keeping machinery in first-class condition. Ability to handle help and get results. Best references. Address, Box 5221, care Paper Trade Journal. Jy-13

OPEN: SUPERINTENDENT of ability, all grades box, container, wall, bristol boards, covers, middles, index and cylinder papers. Expert on de-inking, upkeep and results. Will go any place. Address, Box 5177, care Paper Trade Journal. Jy-6

SITUATIONS WANTED

WANTED: Line of paper mill supplies by a live man well acquainted with the personnel of mills in the Kalamazoo Valley and vicinity. Address, Box 5222, care Paper Trade Journal. Je-29

TONNAGE SALESMAN: Thoroughly experienced, all grades, book and news, desires connection with reputable manufacturer or mill agent selling to jobbers and large consumers. Age, 30; clean cut, well educated. Address, Box 5223, care Paper Trade Journal. Jy-6

EXPERIENCED MECHANICAL ENGINEER seeks new connection Paper or Pulp mill. Capable and with record of maintenance at low cost. Familiar with foreign Mills operations. Best references. Address, Box 4981, care Paper Trade Journal. Je-29

WANTED—Position as Assistant Superintendent. Twenty years' experience on Fourdrinier machines making rag and sulphite papers. Married and industrious. Good references. Address, Box 5196, care Paper Trade Journal. Jy-6

A MAN thoroughly competent to run Calender and Press Roll Grinding Machine and able to determine Crowns desired. Wishes permanent or temporary work. Address, Box 5197, care Paper Trade Journal. Ag-3

BOSS FINISHER desires to make a change. Twelve years of Finishing Department experience on Cutters, Trimmers, Kidder Press Rewinder all styles of finishing domestic and export on Wrappings, Tissue and Glassine. Capable of taking full charge of finishing and shopping department, also inventory. Can furnish good references as to ability, character and personality. Address, Box 5198, care Paper Trade Journal. Jy-13

SUPERINTENDENT desires position as Corrugated and Fibre Superintendent. Nine years' experience, thoroughly familiar with all makes, Combiners and swift Combination Machines. Address, Box 5200, care Paper Trade Journal. Jy-13

MASTER MECHANIC with 27 years' Pulp and Paper Mill experience is open for engagement, familiar with Boilers, Engines, Electrical and General Maintenance. First class references. Address, Box 5201, care Paper Trade Journal. Jy-20

MAN with ten years' practical experience in sulphate pulp manufacture is open for position as Superintendent or Assistant. Can obtain highest results. Best of references. Address, Box 5202, care Paper Trade Journal. Jy-13

I HAVE FOLLOWING among important paper buyers in Cuba, Mexico and South America and wish to conduct export department with mill or large jobber. Will also consider domestic selling proposition with responsible mill. Have acquaintance among New York buyers. Address, Box 5211, care Paper Trade Journal. Je-29

PAPER SALESMAN in New York City who can produce a large volume of business with adequate co-operation, desires connection. Drawing account on Commission basis. Correspondence invited. Address, Box 4635, care Paper Trade Journal. tf

WANTED POSITION—As superintendent. Twenty-one years' experience; used to Specialties, Colors and Wrapping, all grades of Boards and Fibres. Knows how to handle help. Can keep up repairs. Used to Fourdrinier and Cylinder Machines. Address, Box 4786, care Paper Trade Journal. tf

WANTED: By a New York Manager and Representative of an out of town Manufacturer of Toilet Paper and Paper Towels, similar connection with reputable manufacturer. Have been in the line over 20 years, over 15 years of which I have spent with my concern. Address, Box 5114, care Paper Trade Journal. Je-29

SUPERINTENDENT of many years' experience in producing Box Boards is seeking a connection where quantity and quality production at a minimum cost will be recognized. Have best of references, for efficiency and maintaining harmony among employees. Address, Box 5117, care Paper Trade Journal. Jy-13

SITUATIONS WANTED

SUPERINTENDENT now employed as such work who had practical experience on Cylinder, Harper, Fourdrinier and Combination machines, well posted on nearly all grades of paper, also practical experience on ground wood and sulphite, also mill construction and upkeep of same. Past records show good results. Would prefer commission proposition, also invest capital with reputable company. Address, Box 5132, care Paper Trade Journal. Jy-6

YOUNG MAN, 25, married, wishes to connect with Paper Mill. Has had experience in Paper Mill cost accounting, payrolls and mill systems; also selling experience. At present calling on printers and publishers. Feels qualified to fill almost any inside position or be useful in Sales Department. Address, Box 5145, care Paper Trade Journal. Jy-13

ACCOUNTANT: Systems installed for 2,500 accounts, $300,000 sales; jobber in city of 85,000; seven years. Can handle double this volume of accounts with accuracy. Efficient supervision of expenses, sales and credits. Expert buyer paper products, twine, stationery, toys, general merchandise and store fixtures. Address, Box 5180, care Paper Trade Journal. Je-29

A PAPERMAKER of ability knows paper from A to Z, number of years jobbing experience, as Manager and Buyer, Paper, Twine and Cordage, desires to connect with a reliable House in a similar capacity, high grade references. Address, Box 5185, care Paper Trade Journal. Jy-20

WANTED: Position as Mill or Box Plant Manager by Competent Executive. Experienced in manufacture of Box Boards, Folding Cartons and Solid Fibre Cases. Address, Box 5113, care Paper Trade Journal. Je-29

WE INVITE able, practical, paper mill men who have funds to invest in a mill property, and who wish to be in active management, to correspond with us. We have two good sized mills for sale whose chief owners are aging, and who are willing to sell their properties outright, or a controlling interest only, to capable men of high standing who know the business thoroughly. We are handling this business confidentially for the owners and will do likewise for prospective buyers. Gibbs Brower Co., 261 Broadway, New York. 166 W. Jackson St., Chicago, Ill. Je-29

BEATER ENGINEER wishes to make a change from his present position. Experienced on high grade Box Boards, Tests, etc. Also fine papers. Married, sober. Good references. Address, Box 5167, care Paper Trade Journal. Jy-6

PRACTICAL PAPER MAKER desires connection with Board or Specialty Mill. Experience in all departments, Manufacturing, Power Plant, Maintenance and Repair, Shipping and Receiving. Familiar with routine of large office. Address, Box 5178, care Paper Trade Journal. Je-29

EXECUTIVE ABILITY. Eighteen years experience in Asphalt Roofing Business, desires position as manager or superintendent. Can furnish excellent references. Would consider opening in other lines. Not afraid of work. Address, Box 5179, care Paper Trade Journal. Je-29

General Superintendent
OR
Manager

now employed will be open for position after July 15th. Experience covering a variety of products, including High Grade Book, Envelope, Bonds, Ledger, Writings, and Specialties. Would like to communicate with concern planning such a change in their organization. Address, Box 5195, care Paper Trade Journal. Jy-13.

FOR SALE

FOR SALE: 86" Fourdrinier Tissue Paper machine consisting of Packer Screen Fourdrinier, two Presses, twelve dryers, stack of calenders, reel and rewinder. This machine now running, but delivery could be made early in July. Address, Box 5181, care 5175, care Paper Trade Journal. Je-29

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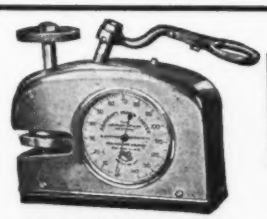
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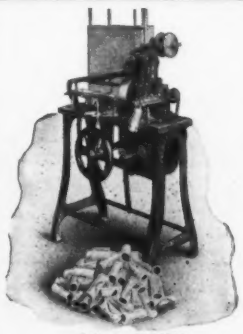
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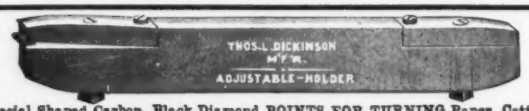

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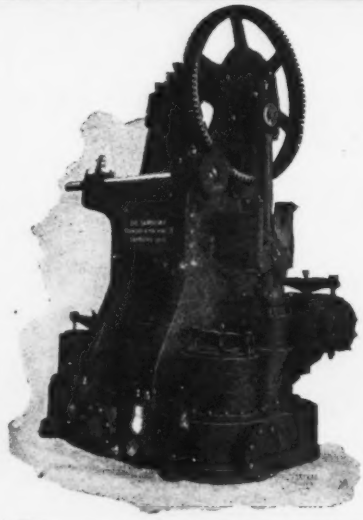
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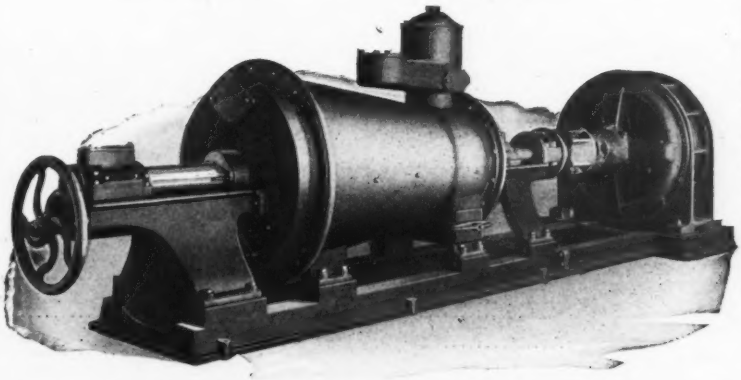

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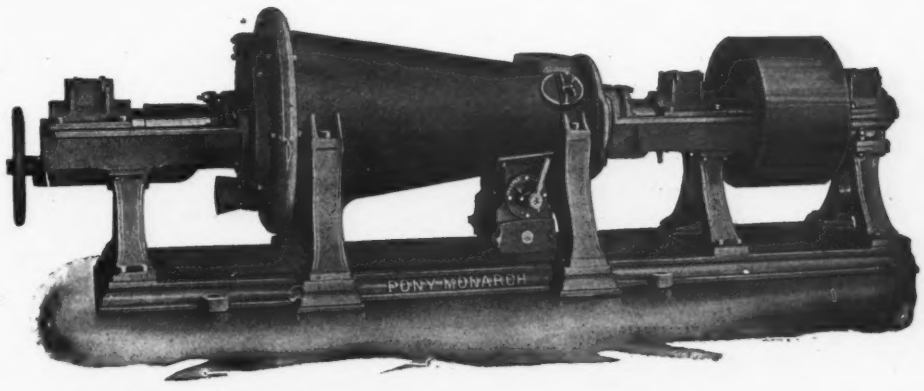

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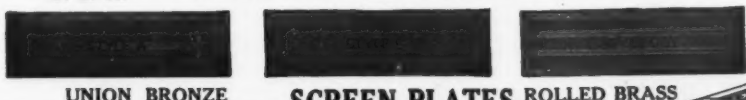

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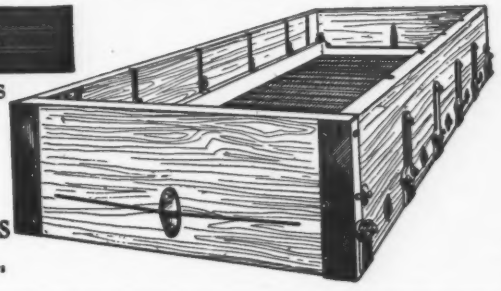

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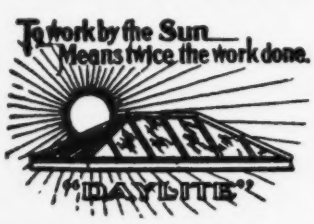

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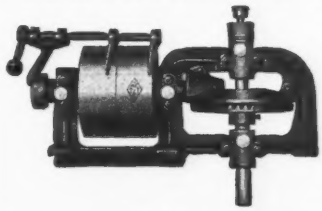

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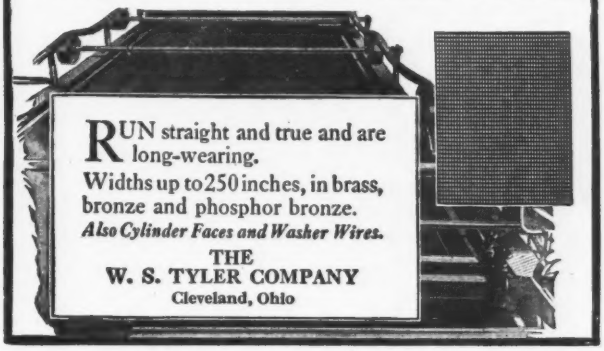

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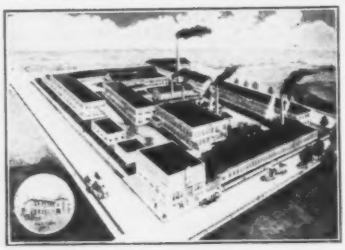

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